Please Check and Pass On

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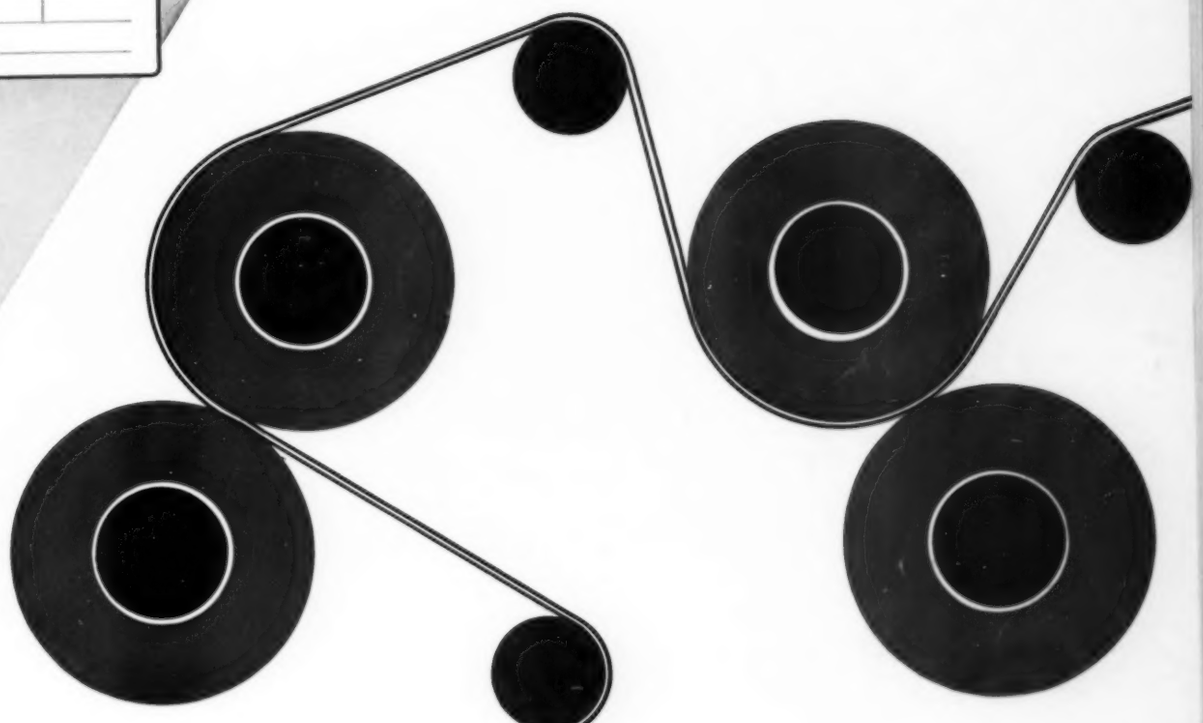
July 1956

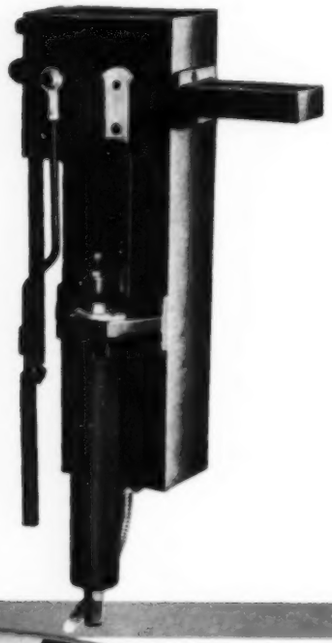


PRINTING EQUIPMENT *Engineer*

an industry-wide technical publication

Deluxe Equipment is Standard on

THE STAR SELECTRO-MATIC QUADDER!



One of the many outstanding features of the Star Selectro-Matic Quadder is the simple Push Button Control Selector Box . . . standard equipment on all Star Quadders. It is conveniently attached to the right hand side of the keyboard and eliminates the necessity of an operator reaching to change a quadder signal . . . no stretching or squinting to make sure of the proper selection. Also conveniently located, right on the selector box, is the pump stop control switch, making it easy to "kill" a line not wanted at any time before the cast.

This is only one of the many attractive features of the Star Selectro-Matic Quadder, designed to increase operator efficiency and white space production.

Write for the new Star Quadder catalog today.

BRANCH:
1327 BROADWAY, KANSAS CITY, MO.

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LOS ANGELES • DENVER • BOSTON
CANADA: SEARS LTD. and Agents Overseas

STAR PARTS, Inc.

★ Precision TRADE ★ MARK Parts ★

SOUTH HACKENSACK, N. J.

★ ★ ★

thanks!

to the many, many newspaper mechanical executives who took time during the Dallas ANPA Mechanical Conference to see the STA-HI Stereotype Color Register System in actual operation. It is encouraging to see such genuine interest in new methods and new equipment designed to help this great industry.

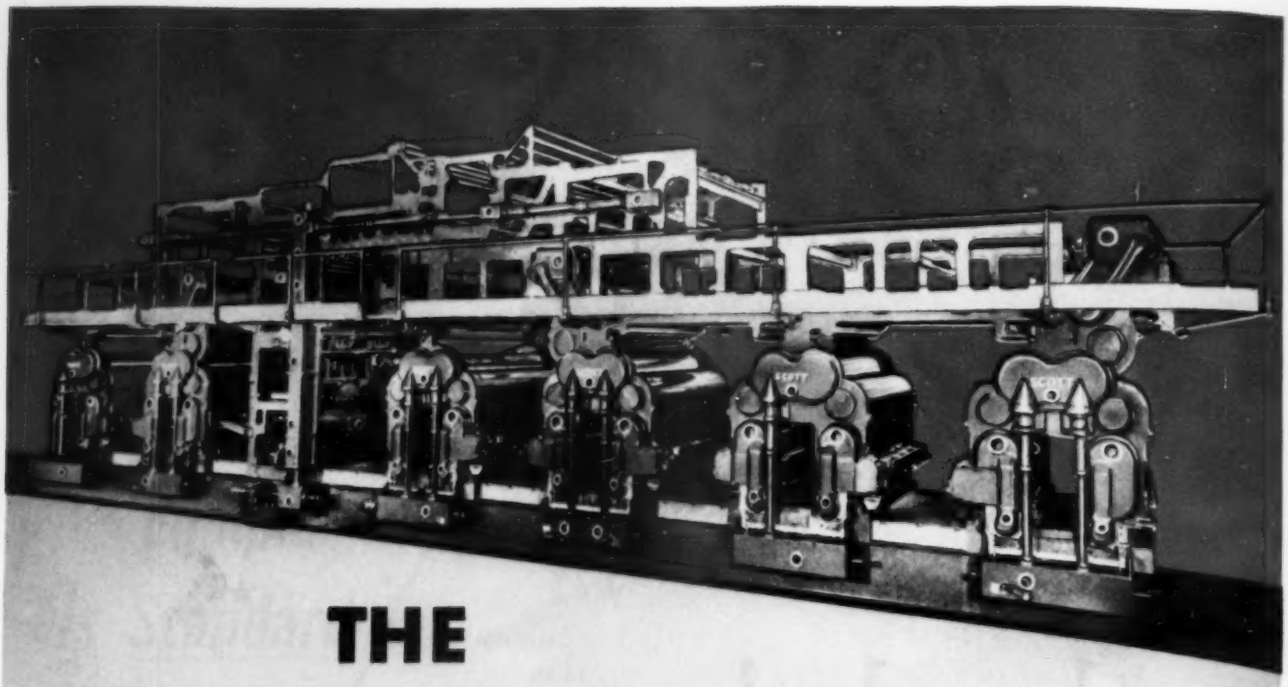
THANKS also to the Dallas Morning News and its management and mechanical staff for cooperating so splendidly in permitting us to use their plant and facilities for this demonstration.

PLEASE feel free to ask us for detailed information on this time and money saving STA-HI equipment. A brochure describing our color register operation as shown in Dallas is yours for the asking.

Sta-Hi Corporation

WHITTIER • CALIFORNIA

★ Pictured above, left to right: Sta-Hi's Master Matcher, Master Trimmer, Vacuum Flat Former



THE SACRAMENTO BEE

Speeds production to match its growing circulation

WITH a daily circulation now upwards of 140,000, the Sacramento Bee has just installed the most modern printing equipment available to meet expanding requirements. It's the latest SCOTT Extra High-Speed Press, of course, with many new features that set advanced standards of performance.

This press is comprised of six units, one pair of 3-to-2 ratio folders of our latest improved design, with enclosed gears, forced feed oiling system, folded edge forward delivery, three single reverse drives, one double reverse drive, three color plate cylinders and eight built-in, extra-color fountains, each four pages wide. All units are driven by individual motors.

From inking to folding and delivery, this SCOTT Extra High-Speed Press reflects a sound basic design constantly improved and refined.

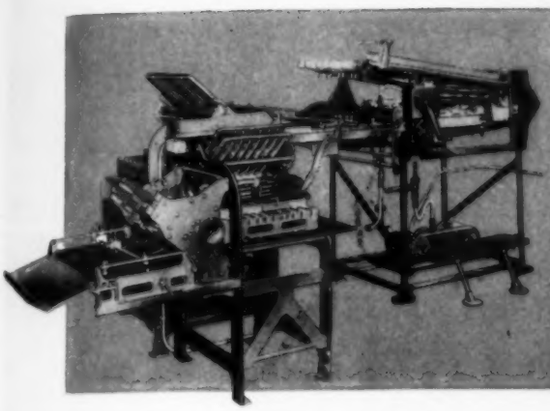
WALTER SCOTT & CO., Inc.

PLAINFIELD, NEW JERSEY

—566

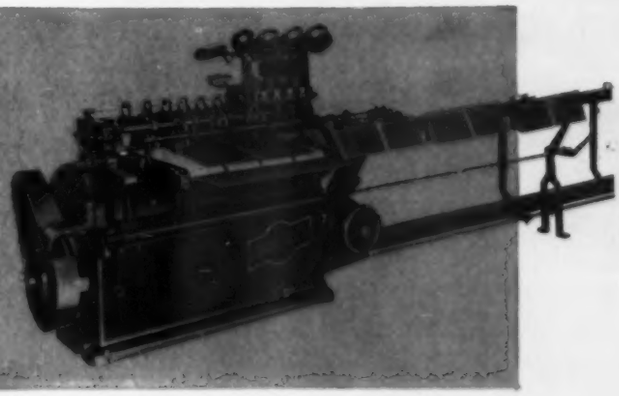
DEXTER

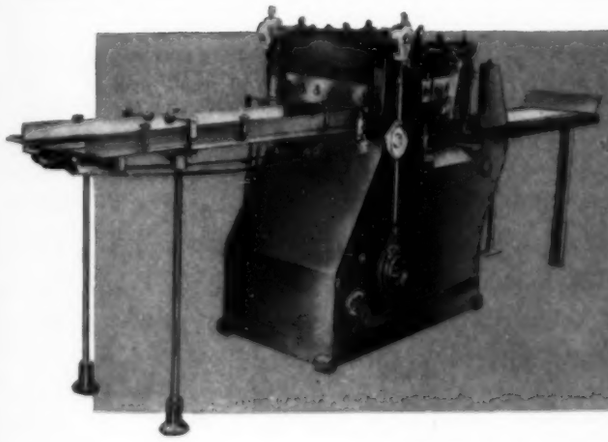
Profits from Pamphlets!



FOLDING is the first step in achieving profits from pamphlets . . . and Cleveland Folders, available in a wide range of sizes, are the standard of the industry. Precision-built, of top quality materials and workmanship, every Cleveland is designed for many years of high-quality, high-speed production.

GATHERING & STITCHING of folded signatures is the next step to bindery profits. The Christensen Gang Stitcher, in the model best suited to your needs, will gather and saddle stitch as fast as operators can feed it . . . up to 7500 books or gangs per hour with McCain Automatic Feeders . . . with unvarying accuracy and reliability.





TRIMMING with the McCain Automatic 3-knife Trimmer not only increases profits but saves floor space and handling expense. Untrimmed books from the Christensen Gang Stitcher are automatically conveyed to the McCain Trimmer where 3 sides are trimmed, and finished books delivered ready for wrapping or packing. Attachments are available for cutting apart books stitched two-up or with bleed trim.

ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER FOLDER COMPANY

General Sales Office

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—for fast, in-line plate casting and finishing

Designed to meet the daily needs of smaller city newspapers . . . a compact, efficient plate casting and finishing machine that combines accuracy and uniformity of production with time-saving in-line operation.

FOR TENSIONPLATE LOCKUP. . . The *WOOD AUTOMILLER* can be used in conjunction with the *NEW STANDARD PONY AUTOPLATE.* If you run color you can pre-register color plates on the Automiller, ready for the press.

WRITE FOR DETAILS ABOUT THE EXCLUSIVE FEATURES OF THIS NEW PLATE CASTING MACHINE

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY

EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N.Y.

July 1956

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields, covering major processes.

PRINTING EQUIPMENT Engineer

Volume 86 Number 10

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how ATF helps printers get better, more profitable printing

BEFORE YOU BUY—
consult ATF's complete line..., whatever your printing needs.

Get the facts. Use the checklist below to indicate the equipment in which you are interested. Use coupon on opposite page to get more detailed information.

OFFSET
Web-fed Presses
- ☐ Publication Presses
- ☐ Commercial Job Presses
- ☐ Business Forms Presses
- ☐ Specialty Presses

Sheet-fed Presses
- ☐ Single Color, up to 42" x 65"
- ☐ Two Color, up to 48" x 65"
- ☐ Perfecting, 38" x 53"

LETTERPRESS
Web-fed Presses
- ☐ Publication Presses
- ☐ Rubber Plate Presses

Sheet-fed Presses
- ☐ Cylinder Presses, up to 25" x 37"
- ☐ Proof Presses

GRAVURE
Web-fed Presses
- ☐ Publication Presses
- ☐ Packaging Presses
- ☐ Specialty Presses

Sheet-fed Presses
- ☐ Two to Six Colors, 20½" x 28½"
- ☐ Two to Six Colors, 35" x 50"
- ☐ Proof Presses

FLEXOGRAPHIC
Roll to Sheet Presses
- ☐ Four Colors, 11" x 17"
- ☐ Four Colors, 18" x 22"
- ☐ Six Colors, 18" x 26"
- ☐ Other sizes to suit

Roll to Roll Presses
- ☐ Three or Six Colors, widths: 12½", 17", or 20½"
- ☐ Three to Six Colors, widths: 26½", 31½", 37", or 43"

with ATF's printing progress plan

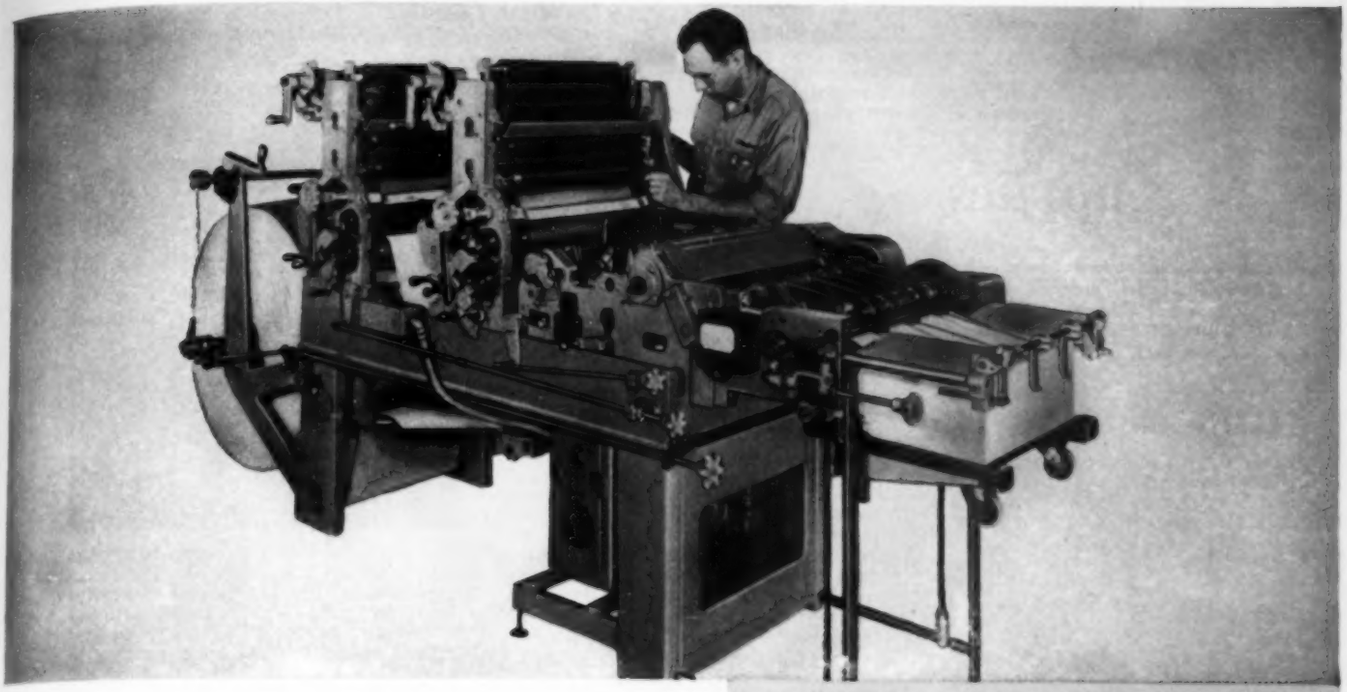
How many hundreds or thousands of dollars are *you* losing this year because of obsolete equipment? You can put an end to this "No. 1 profit-stealer"—and start right now.

"But," you ask, "can I afford the equipment I need?" ATF answers with the most liberal, lowest-cost finance plan in the industry. Good trade-in allowances, low monthly payments with simple interest on the unpaid balance make "pay-as-you-earn" purchasing possible. or you can *lease* ATF equipment, if you prefer. Ask your ATF Representative for full details on either plan.

ATF's Printing Progress Plan offers you the *right equipment* from the most complete line available in the graphic arts industry. *Only ATF* offers sheet-fed and web-fed offset presses, sheet-fed and web-fed letterpresses, sheet-fed and web-fed gravure presses, and web-fed flexographic presses—the right press and process for nearly every printing requirement.

ATF Service helps you keep your equipment producing profits. A call to Western Union "Operator 25" brings prompt action, should an emergency arise. ATF Spare Parts Kits provide low-cost replacements, on hand when you need them, for parts normally subject to wear (tapes, sucker tips, belts, etc.).

ATF **better—more profitable printing from the most**



ATF GREEN HORNET—a high-speed, roll-fed commercial offset job press for standard sized work.

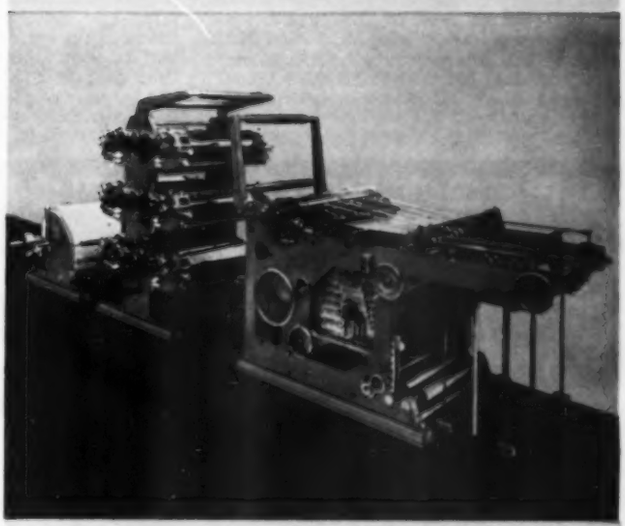
AUTOMATION for your pressroom is within your reach now!

You can have tomorrow's flexible, low-cost production methods in your pressroom today—with ATF high-speed web-fed job presses.

The ATF Green Hornet 11½" x 17½" commercial offset job press prints two colors on one side, or one color on each side . . . uses economical rolls of paper . . . delivers cut sheets at speeds up to 25,000 per hour. You can run 8½" x 11" forms two-up and slit as you print, producing 40,000 or more sheets per hour. Print on any uncoated stock suitable for offset, from lightweight bond up to 80 lb. offset. Fast, simple changeover makes the Green Hornet highly profitable for even short runs of standard-size jobs.

The ATF Pavema AV4D six color flexographic job press prints up to six colors on the face of the web, or 5 on the face and one on the back, 4 and 2, 3 and 3, etc. It numbers, perforates both horizontally and vertically, and slits. Delivers flat sheets cut to any desired length in ¼" increments from 12" to 24". Takes rolls of stock up to 26" wide. Features *three-roller* inking systems for superior ink control, patented swing rotary knife cut-off, collect delivery system. Produces 10,000 or more printed sheets per hour with 18" cut-off.

Ask your ATF Representative how these two presses can produce extra profits from work now being done on slower presses.



ATF PAVEMA—a six color flexographic press for high-speed printing with rubber plates.

complete line of equipment

ATF

American Type Founders
200 Elmora Avenue
Elizabeth, New Jersey

I'm interested in more information about ATF's_____

_____

Size:_____ Colors:_____

Name_____ Title_____

Company_____

Street and Number_____

City_____ Zone____ State_____

PE-7

Equipment and *Supplies*

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Color Tolerance Computer

An electronic Color Tolerance Computer is announced by Instrument Development Laboratories. This instrument, in connection with a color-

photometer, is used to compute deviations from color standard and to present the answer as a single number on a dial calibrated in NBS (National Bureau of Standards) units. The calculation can be completed within one minute. When deviation beyond the acceptable tolerance is shown, the Color Tolerance Computer will present, in NBS units, the color errors; light-dark, red-green, and yellow-blue. According to the manufacturer, this instrument will compute the correction necessary to obtain the required color. When the Color Tolerance Computer has computed the correction, the formula can be brought within tolerance standards with a minimum of color adjustments. Although designed for use with the IDL Color-Eye colorphotometer, the computer is useful with other colorphotometers. The instrument is based on an arrangement of the mathematics involved in the Hunter and Adams systems of color tolerance computation. Range of Color Tolerance Computer is from 0 to 20 NBS units. Accuracy is ± 0.1 NBS unit or 3%, which is within the tolerance of commercial color requirements. For further details, please mention PEE No. 170 in your request.

Metalife Solution Additive

Metalife Laboratories of William A. Frangos, Inc., has announced a replacement for Gum Arabic in platemaking and pressroom solutions. The ingredient is said to improve Metalife Etches and Press Fountain and Gumming-up Solutions. It is claimed never to deteriorate, to be non-toxic and to stop plate oxidation. For further details, please mention PEE No. 173 in your request.

Baldwin Blade Setting Template

A blade-setting template is now available from William Gegenheimer Co., Inc. for use with its Baldwin Press Washers. The template is for

adjustment of the scraper blade for ink removal in washups. The templates are now provided with all Baldwin Press Washers and with replacement blades. They may be obtained without charge for previously purchased washers. For further details, please mention PEE No. 167 in your request.

Du Pont Photocopy Paper Developer

The 57-D Photocopy Paper Developer, which is said to have 25% more processing capacity, has been announced by the Du Pont Photo Products Dept. For use with Photo-Writ

(Continued on Page 10)

SPEED PRODUCTION with
RICHARDS' PRECISION
SAWS • ROUTERS • MORTISERS

For further information on these and other RICHARDS EQUIPMENT, *Saws — Routers — Mortisers, please write*

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For Stereotypers, Electrotypers, Photoengravers
Code: EST-27x36 Table
ESST-32x42 Table

Code: PMRS
'MULTIFORM' RADIAL ROUTER
For Straightline and Fine Detail Routing
Patented Straightline Control Feature

NEW MODEL
Code: M2-B
ENCLOSED CURVED PLATE ROUTER
with new close coupled single belt drive
Ball bearing construction throughout
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J. A. RICHARDS COMPANY
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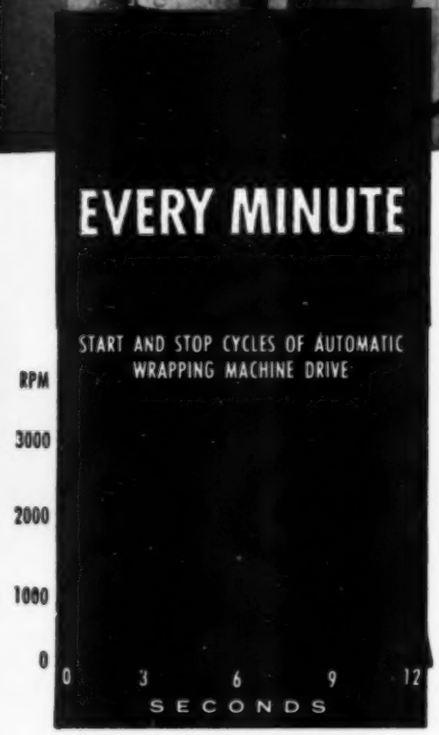


The Dow Chemical Company's production of "Saran Wrap" has leaped from 130,000 rolls to 4,000,000 rolls a month since 1951. This up-swing is due to a new plant, a new flow system, and additional equipment including new machinery equipped with Reliance V★S Drives.

One of the most dramatic applications of V★S Drives is on the final wrapping machines shown here. The drives must be able to start, accelerate to 3500 rpm., and stop more than 20 times a minute.

The most important feature, though, is not the frequent starts and stops, but the delicately controlled acceleration of the drives. "Saran Wrap" is only 1/6th as thick as a human hair, and sharp or jerky starts will cause a break in the sheet and halt production. Reliance Drives do the job day in and day out without a single break due to uncontrolled acceleration.

This feature of V★S Drives, called *Dynamic Response*, is only one of the many facets of Reliance Drives. V★S Drives can regulate tension, synchronize operations, control speed rates, and automatically program speed changes.

Whether you handle a thin film of plastic or steel billets, on a complete production line or a single machine, Reliance can give you better quality, more production, and lower costs through Variable Speed Drives. D-1006

Write for bulletin D-2311.

RELIANCE V★S DRIVE ®

RELIANCE ELECTRIC AND ENGINEERING CO.

DEPT. 127, CLEVELAND 10, OHIO • Sales Offices and Distributors in Principal Cities

Canadian Division: Welland, Ontario

Equipment & Supplies

(Continued from Page 8)

photocopy paper and similar photographic papers, the developer is said to have a slightly faster development rate, plus darker blacks. For further details, please mention PEE No. 164 in your request.

Panelmount Electric Counter

Development of a panelmount PIC 600 electric counter that is reset by a key from the front of the panel is announced by Production Instrument Co. The counter is designed for application where it is necessary to guard against indiscriminate resetting. A single turn of the reset key resets the counter to zero. Designed for installation from the front, the

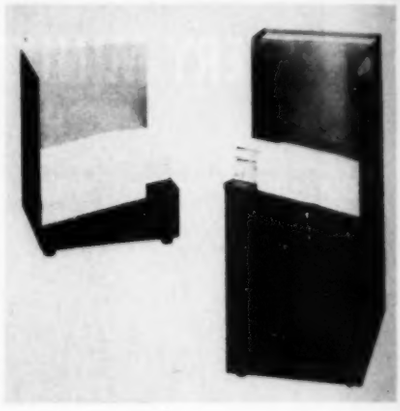
mounting plate is attached directly to the instrument panel. A 1/32 in. thick Neoprene gasket is furnished with each counter. Panel opening required is 4-15/16 in. by 1-13/16 in. The counter extends 2-13/16 in. back of the panel. The mounting plate is 5½ in. by 2⅛ in. with four 0.161 in. diam. mounting holes on 5⅛ in. by 1¾ in. centers. The counter is available for 60, 40-50, 25 cy. and d.c., all standard voltages to 150. For further details, please mention PEE No. 175 in your request.

Release Agent

American Publishers Supply, Inc. recently announced that it is distributor of Dow Corning Slipicone in the United States, Canada, Central and South America. Slipicone is a release agent for use where sticking is a problem. Slipicone is said to be effective on type casting machines. It is put on the mold wipers to keep the face of the mold clean which prevents squirts. Slipicone was formerly known as Dow Corning No. 7 Compound. It is available in 2 oz. and 8 oz. tubes, and in 12 oz. spray. For further details, please mention PEE No. 163 in your request.

Stacking Bin Units

Collamatic recently announced that its two stacking bin units may be purchased separately from its table or console model Collamatic Electric Collator. The stacking bin is an accessory for hand collating and for

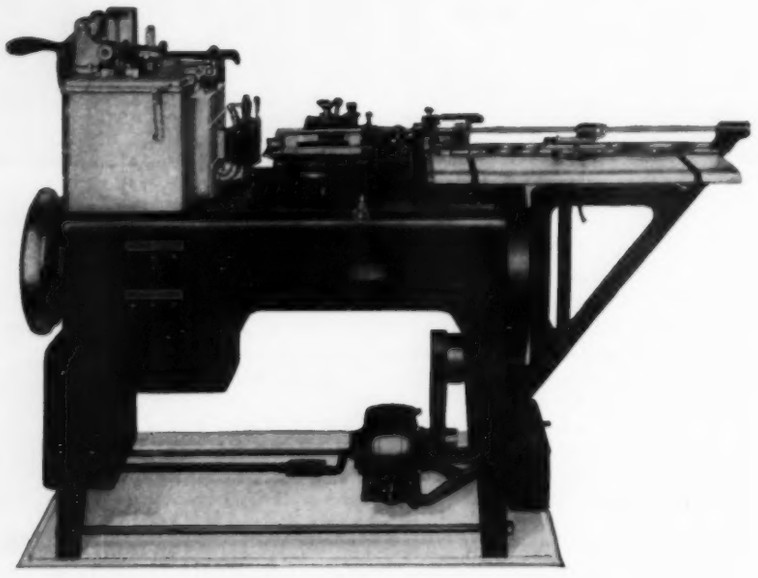


use with other mechanical, electrical, rotary or rack-type collating equipment. The stacking bin is available in a desk-top size and floor stand models. The floor stand model can accommodate either an automatic or a hand stapler. Both bins will accept commonly used page sizes and will hold up to five reams of paper collated into sets. The bins are constructed of heavy gauge metal and are finished in baked gray enamel. For further information, please mention PEE No. 153 in your request.

Fragrance Process Compounds

Fragrance Process Compound, available in a variety of scents and odors, is the name of a substance for adding scent to paper on offset and letterpress units. The compound, manufactured by Fragrance Process Co., is a heavily scented jelly which scents the entire sheet of paper. Some possibilities for use are with stationery, flyers, stuffers, catalogs and product literature. Stock Fragrance Process Compounds include Spruce-

(Continued on Page 12)



Elrod Simplicity

Simple in design and mechanism, the Elrod produces an abundance of high-quality strip material from 1 point to 36 points in thickness. Elrod material is formed as a continuous strip of metal, cooled and solidified under pressure.

Simple in operation, Elrod mold changes are easily made, and the machine will produce strip material for all composing room requirements.

As there is no complicated mechanism to get out of order, Elrod users have found through years of experience that cost of operation and upkeep is very low. Put an Elrod to work in your plant and it will greatly simplify many of your composing room problems. Available in both gas and electric models.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

Print direct for sharper halftone reproduction

Thousands of newspapers are printing direct from original halftone engravings produced on Fairchild Scan-A-Gravers — thus eliminating losses of detail that result from matting and stereotyping.

Fairchild engravings are flexible and easy to use. They mount directly onto the stereo. The resultant reproduction is sharper and cleaner, and approaches the quality of the original photograph. You can be proud of this quality of reproduction and of the reaction it gets among readers.

Fairchild representatives will be glad to show you examples of direct printing and demonstrate how to get better quality with engravings made on Scan-A-Plates®.

• You'll be interested in the flexibility and ease with which these modern, electronically-produced engravings can be used right in your own shop. For complete information write Fairchild Graphic Equipment, Inc., 88-06 Van Wyck Expressway, Jamaica, New York, Dept. 100-32E

FAIRCHILD

SCAN-A-GRAVER

Electronic Engraving Machines

Equipment & Supplies

(Continued from Page 10)

Pine, Gardenia, Chocolate, Carnation, Tobacco, Spring Bouquet, Fine Leather, Bouquet AN-42, Rose, New-Mown Hay, etc. For further details, please mention PEE No. 157 in your request.

Hydraulic Corner Cutter

A hydraulic powered corner cutter has been announced by Craftsmen Machinery Co. With the unit over ½ T. pressure is provided for both the cutter and the paper clamp. Other features include a pump with leak-proof reservoir; top and bottom knives which are said to cut through lifts up to 4½ in.; 20 in. by 36 in. table with jogger back; adjustable paper clamp, and ½ h.p. motor. The machine operates at 40 strokes per min. The cabinet and concealed scrap bin are constructed of heavy gauge steel. For further details, please mention PEE No. 166 in your request.

Densitometer for Quality Control

The Process Densitometer, Model 2, recently announced by Eastman Kodak Co., is for reading the densities of all negatives, positives, and transparencies for photomechanical reproduction. An instrument of the visual comparator type, the model is said to be capable of transmission, reflection, and ground glass readings. Features of the model are: Variable illumination, quick reading of densities, adjustable illuminators, easy filter changing, light integrating cap, and portable photometer. The Kodak

Photometer Head and Transformer, Model 2, the same unit as that supplied with the Densitometer, will also be supplied as a separate unit for making reflection and ground glass readings. With the Model 2, the supporting arm to which the reading head is attached is removed to allow the base to accommodate films or plates larger than 20 in. by 24 in. The optical and illumination system of the model permits reading of reflection as well as transparent copy. Contrast and density range of color prints, black-and-white photographs, and art work can be determined. The Densitometer may be used as a photometer for direct reading of ground glass images. Once a known set of successful exposures has been determined for a standard piece of copy, exposures of other copy may be judged by a comparison of the shadow and highlight values of the new copy to the standard. Only the head of the Densitometer and a transformer are required for this use. For further details, please mention PEE No. 168 in your request.

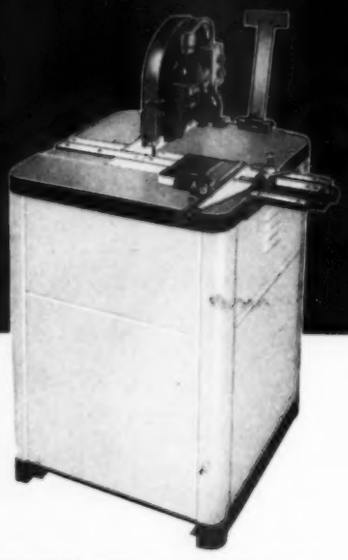
Plate Mounting Equipment

Vandercook Lite-Base may now be purchased direct from Vandercook & Sons, Inc., according to an announcement made by E. O. Vandercook,

president. With this announcement, information was also released on a mounting press called the Vander-

(Continued on Page 14)

NOW!
TWO ROUSE TIME-SAVING
PLATE SAWS
With Exclusive Automatic Feed
For Photoengravers,
Stereotypers, Printers



No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.
2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.
3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.
4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

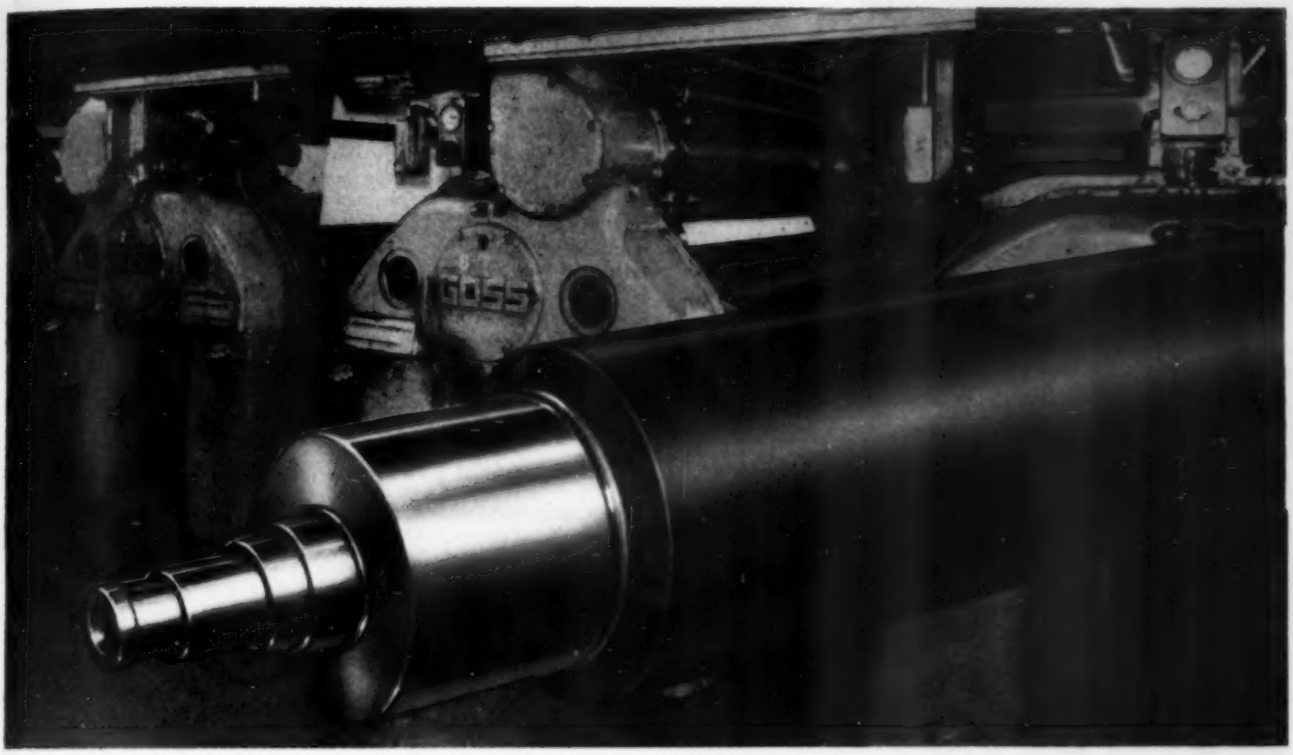
Write for complete details TODAY!

H. B. ROUSE & COMPANY
2214 North Wayne Avenue, Chicago 14, Illinois

ROUSE PRODUCTS...The Standard of the World Since 1899

ALL NEW DAYCO GOLD SEAL* NEWSPAPER ROLLER

gives improved ink control at highest speeds



Proved on today's modern, high speed presses, the all new Dayco Gold Seal Newspaper Roller will help you improve the quality of your press work and at the same time reduce maintenance costs.

You produce sharp, clean halftones, more legible type with the velvet smooth surface of Dayco Gold Seal Rollers. Precision ground, they are made of newly developed, highly resilient compounds which maintain their fine ink-receptive surface, stay perfectly round despite the hottest, high speed runs of open or closed presses.

You reduce roller maintenance and replacement costs, too, with Dayco Gold Seal Newspaper Rollers because their improved tensile strength and greater resilience resist marking and column scoring. Result: you reduce the need for re-grinding and greatly extend roller life.

In addition new, improved Dayco Gold Seal Rollers are fire resistant for increased pressroom safety.

Test a set of the all new Dayco Gold Seal Rollers on your presses. Call your Dayco Representative, or write The Dayton Rubber Co., Dayco Division, Dayton 1, Ohio.

Dayco Rollers . . . for Offset, Letterpress, Gravure, Analin, Coating, Graining, Steel Mills. **Dayco Offset Blankets. Dayco Fountain Dividers. Dayco Color Separators.**

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Dayton Rubber 51 YEARS OF PROGRESS

West Coast Distributor, Tillicum Rubber Co., Lacey, Washington

"NEW ENGLAND" The Oldest Name in Press Blankets

NEW ENGLAND NEWSPAPER SUPPLY CO.

Consolidated with

NEW ENGLAND FIBRE BLANKET COMPANY

164 FREMONT STREET • WORCESTER, MASSACHUSETTS

GARDNER G. DeMALLIE, General Manager

NEW YORK OFFICE 230 West 41st Street New York City TONY CAMMIA

CHICAGO OFFICE 1950 Daily News Building Chicago, Illinois SCOTTY CAMPBELL

SOUTHWEST OFFICE 1225 South Trenton Tulsa, Oklahoma LOUIS F. GAUDREAU

WEST COAST OFFICE 310 DeYoung Building San Francisco, California ED SPARKS

stereoplate delivery

sooner, surer and easier . . .

with Jampol

Methods and Equipment

Typical of how Jampol newspaper handling methods can integrate operations in a plant is the Stereo Plate conveyor system shown above.

With Jampol handling, you can always be sure of three things — even work flow for substantial savings in time and production costs . . . longer lasting precision-made equipment . . . and a definite competitive advantage in meeting delivery deadlines.

If you would like more information about Jampol methods, and their place in improving your plant operations and profits, please write us.

The JAMPOL COMPANY

General Office & Factory: 728-742 61st St., Brooklyn 20, N. Y.

Equipment & Supplies

(Continued from Page 12)

cook 14-19 Plate Mounter. With the press it is said to be possible to mount plates up to 14 in. by 19 in. with heat and pressure on Vandercook Lite-Base in 3 min. According to Vandercook the base will be supplied in 12 in. by 18 in. slabs machined to correct heights for originals, electros, plastic plates and rubber plates. It is claimed that the base may be cut on any printer's saw. When intended for mounting rubber or plastic plates, Vandercook will supply Lite-Base without the holes in the mounting surface. For further details, please mention PEE No. 174 in your request.

Intertype News Gothic

News Gothic and News Gothic Condensed with specially designed

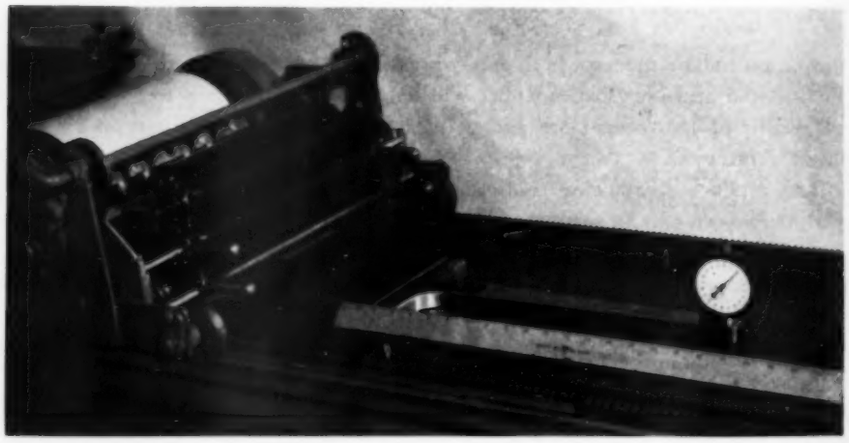
Intertype News Gothic with Bold
Intertype News Gothic Condensed with Bold Condensed

companion bold faces are now available on Intertype matrices for machine composition. These faces—originally conceived as a newspaper headline face but now used in many forms including display advertising, catalogs, manuals and direct mail pieces—can be obtained in 6, 8, 10, 12 and 14 pt. sizes. For further information, please mention PEE No. 156 in your request.

Blackenite Mist Releasing Agent

Blackenite X-23 Mist spray, developed for use on typecasting equipment, has been found of value as a parting agent for plastic and rubber platemaking. Blackenite Mist is sprayed from an aerosol can and is available in 6 oz. and 12 oz. size cans. It dries immediately and promotes smooth separation of pattern and mold. Blackenite Mist, being

(*Continued on Page* 16)

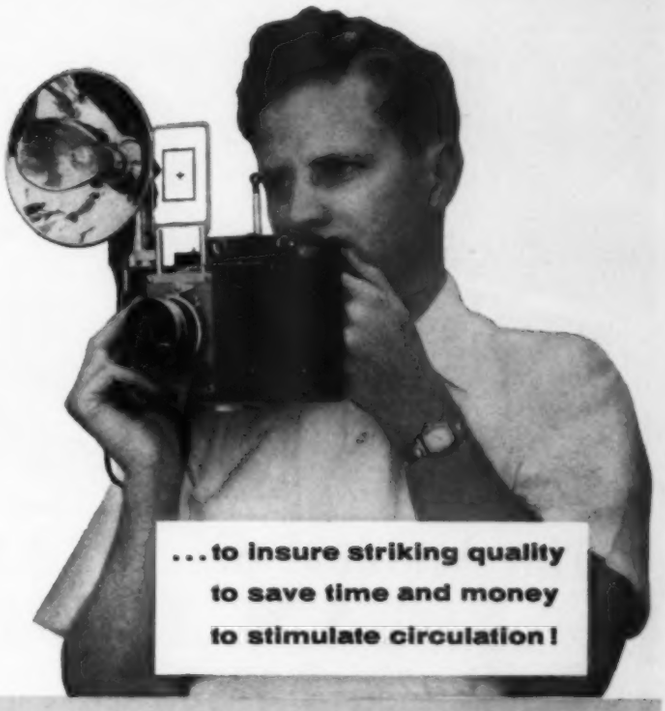


The Huck Pressure Sensitive Base gauge is a mechanical gauge for measuring printing pressure on a proof press. The Huck pressure gauge is designed to duplicate an absolute measure of printing pressure to the proof press. The gauge is 26 in. in length and 7 in. in width. Dial reading is from 0 to 600 lbs. per linear inch. The gauge can be used with plates 6 in. by 7 in. or 3 in. by 7 in. The Huck Pressure Sensitive Base is a stainless steel, bridge-like instrument that is used to support the printing plate or plates. It is used to deflect a slight amount under printing pressure. This deflection is amplified by a lever arm and the motion is translated and measured on a sensitive indicator. This indicator is calibrated to read directly in lbs. per linear inch of printing pressure. For further details, please mention PEE No. 177 in your request.

Here's how Curtis *simplified*
ROP COLOR works...

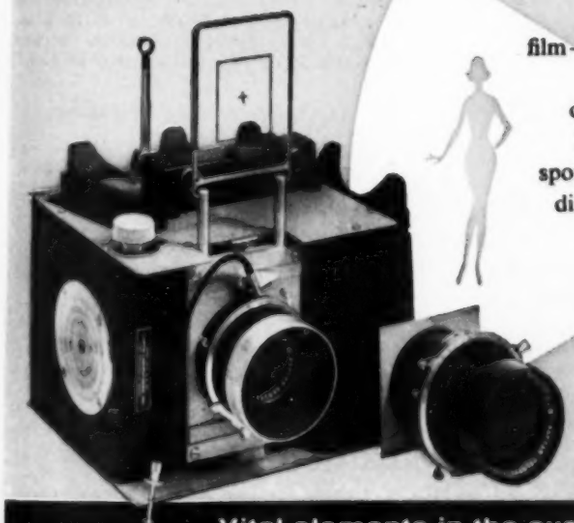
Any *good* newspaper becomes a *better* newspaper when it adds *ROP Color* to its news, sports and editorial features. There's an immediate "sparking up" of reader-interest that helps increase circulation, readership and profits! Everywhere people are *color-conditioned* by magazines, movies, TV—and the many other media that use color to attract reader attention. Today—newspapers must add color to compete...and your *best* approach to color is *Curtis ROP Color!* Here's why...

- *Time is the essence of news value!* With Curtis ROP Color you move from picture to press run *in minutes,* while the news is still hot!
- *Curtis ROP Color is economical!* It gives you tremendous savings in production costs compared to ordinary color methods.
- *And most important, you get quality reproduction!* High fidelity color and tone reproduction assures maximum eye-appeal on newsstands and in the home.



...to insure striking quality
to save time and money
to stimulate circulation!

1 gets you 3 with Curtis Color Camera!

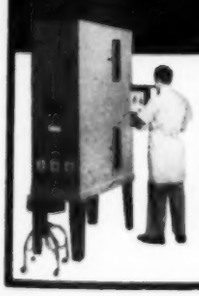


You get *color* pictures from black and white film! Using *ordinary black and white* panchromatic film—the Curtis One-Shot Color Camera gives you three balanced color separation negatives directly from the subject with a *single* exposure! Precision engineered for high speed newspaper spot news, sports or editorial photography—the Curtis direct color Camera will save you time and money, hours of effort! It's compact and light to carry—easy to handle—simple to use. Available in two models—the Curtis 4 x 5 Color-Scout or the 2½ x 3½ Press Special.

The Curtis ROP Color System is simple and easy to use—and it is explained clearly and concisely in a FREE ROP color booklet which will be sent to you without obligation of any kind. Mail the coupon today for your copy.

Vital elements in the system also are:

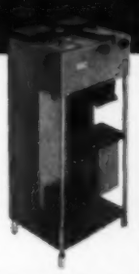
CURTIS COLOR ANALYST



An optical device using filters and mirrors to produce a single full-color image from three black and white separation prints or proofs. Shows clearly the need for and extent of any color correction required.

CURTIS COLOR PRINTER

Produces the finest possible color separation negatives from color transparencies... from 35mm to 2¼" x 3¼". Complete with filters and fully corrected lenses. It is not required when Curtis one-shot Color Camera is used.



CURTIS LABORATORIES, Inc.
2718 Griffith Park Boulevard, Los Angeles 27, California

☐ Please send free booklet "ROP Color Simplified."

☐ Please send information on Curtis one-shot Color Camera.

Name_____

Newspaper_____

Street_____

City_____ Zone____ State_____

The Accident did NOT happen

thanks to A.W. ALGRIP

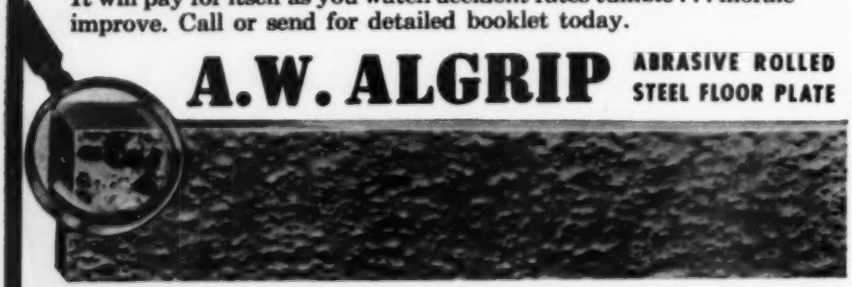
World's only abrasive rolled-steel floor plate

Under the most hazardous slipping conditions, accident rates and insurance rates—*not men*—go tumbling down when ALGRIP's thousands of abrasive friction-particles grip every step.

ALGRIP, made by a patented process, is tough rolled-steel plate into which a hard abrasive has been rolled—*not coated*—to a controlled depth as an integral part of the steel plate. Usage merely exposes more abrasive particles. Easily fabricated, ALGRIP can be overlaid or used as a complete flooring—with a minimum of maintenance.

Make a test installation of ALGRIP in your *worst* slipping area. It will pay for itself as you watch accident rates tumble . . . morale improve. Call or send for detailed booklet today.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE



ALGRIP—approved for safety by Underwriters' Laboratories.

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-30

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____

Other Products: A. W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

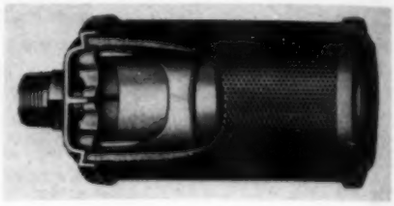
Equipment & Supplies

(Continued from Page 14)

a conductor, can also be used on the master in copper electrodeposition to aid separation from the mold. It sprays on in a microscopically thin film. In rubber platemaking, spraying the original type or electrotypes is sufficient; enough Blackenite Mist remains in the original mold to permit easy parting of plate from the mold. The aerosol cans are equipped with a plunger type spray valve. For more information, please mention PEE No. 172 in your request.

Air Exhaust Muffler

The Allied Witan Co. recently introduced its Atomuffler, a pneumatic muffler for air-operated equipment. The Atomuffler model is equipped



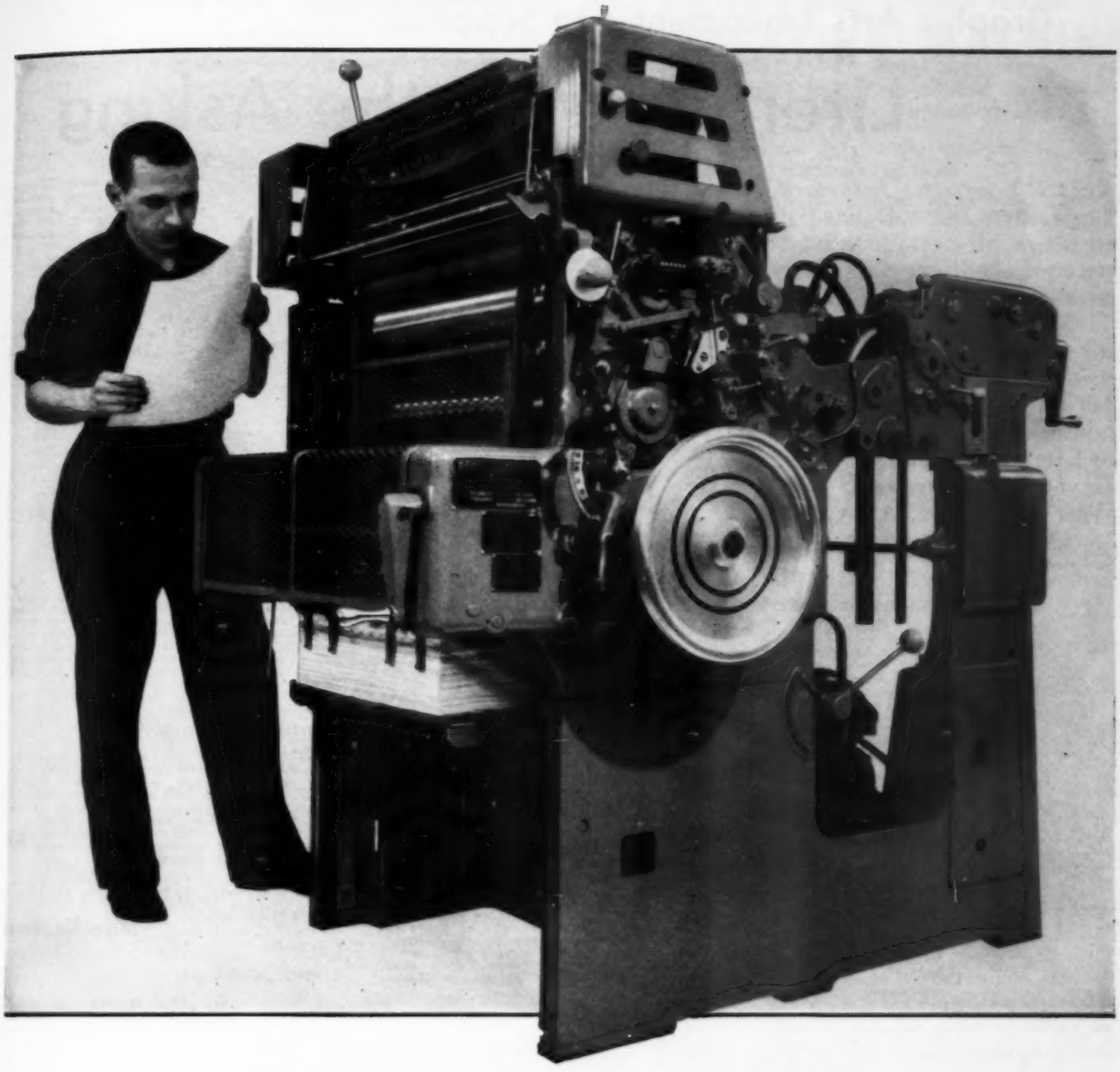
with a four port deflector which, combined with an internal acoustical resonator, is said to give uniform air dispersement with effective impingement, resulting in improved noise cancellation and air flow. Installation can be made with the use of an ordinary wrench. The Atomuffler is available in sizes from ⅛ in. to 2 in. N.P.T. For further details, please mention PEE No. 160 in your request.

Davidson Folding Machines

Davidson Corporation has announced two models of a small folding machine upon which scoring, slitting and perforating can be done. The new machines, the Davidson Embee line, are used to produce one or two parallel folds in a variety of paper stocks, from light manifold to cardboard. Sheets up to 9¾ in. by 18 in. are handled by the smaller, Model 230. Max. sheet size for the larger,

(*Continued on Page 22*)

The press you've been waiting for...



IS WAITING FOR YOU!

That's right. The long-awaited 14½ x 20½" HARRIS OFFSET JOB PRESS is now in regular production.

All the advantages of offset print quality, register, flexibility, productivity, and economy are now available in the "bread-and-butter" press size.

Backing Model 120 as a fully qualified member of the Harris family are thousands of hours' operation for one full year in shops large and small under widely varying requirements. Verified field reports on presses in everyday use confirm that Model 120 produces more salable, quality sheets than *any other sheet-fed press of its size.*

Check today with your Harris-Seybold sales representative for just-gathered production data. He can give you firm delivery and installation dates on the press America's printing industry is talking about. Harris-Seybold Company, 4510 East 71st Street, Cleveland 5, Ohio.

HARRIS SEYBOLD COMPANY

HARRIS PRESSES

Harris Presses • Seybold Cutters • Harris Litho-Chemicals
Special Products • Cottrell Presses • Platemaking Equipment
Macey Collators

Graphic Arts Equipment and Supplies

Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer,* 1276 West Third St., Cleveland 13, Ohio.

Composing Room

TYPE SPECIMEN BOOK

A supplement to the Linotype One-Line Specimen Book has been printed by Mergenthaler Linotype Co. The supplement replaces two earlier addenda, and brings the type faces shown in the One-Line Specimen Book up to date. New faces and point sizes included are Fairfield Medium, Primer, Eldorado, the new Trade Gothics and additions to the Spartan Family. In the supplement, sections detailing additions to the typographic resources, such as special depth matrices, new figures and specimen alphabets are contained. Some 20 pages are devoted to faces and point sizes and 10 pages to an index for both the supplement and One-Line Book. For a copy, please mention PEE No. 174L in your request.

VISILITE MAGAZINES

A bulletin titled *Visilite Magazines for Intertype Linecasting Machines* was recently published by Intertype Corporation. In the four page bulletin Visilite magazines, which include full-length, three-quarter split, half split lengths and corresponding stubs in both the 90 and 72 channel types, are illustrated. The features of Visilite magazines are listed in the two color bulletin. For a copy, please mention PEE No. 175L in your request.

Platemaking

PLATEMAKERS GUIDE

Platemakers Guide, a reference booklet in which is presented aspects of preparing presensitized photo offset plates, is being offered by Minnesota Mining and Mfg. Co. In the 31 page booklet, 110 subjects and 40 illustrations are included. A contrast-comparison guide which shows the negative contrast required for smooth surface plates is contained in the booklet. Other subjects are on proper stripping, negative consideration, plate handling, chemical handling and trouble shooting. For a copy, please mention PEE No. 176L in your request.

RUBBER PLATE STRETCH CHART

A method by which artists can determine the accurate artwork dimensions and compensate for the stretch factor of Porter & Dugas PD-A2 rubber plates, has been developed by Porter & Dugas, Inc. With the use of the Stretch Factor Chart, artwork dimensions, it is claimed, can be determined to the thousandths decimal and assures exact register in printing. In the preparation of wrappers, cartons and other packages, compensation need only be calculated in the direction the PD-A2 rubber plates goes around the cylinder. The chart is used to determine the print circumference stretch per inch and overall stretch for 150 bare cylinder diameters in sizes from 2 to 11.350. Directions for using the chart are printed in the margins. Designed primarily for plates with overall thickness of 0.125 in., in the chart is also included a stretch factor key for other thicknesses. For a copy, please mention PEE No. 197L in your request.

Pressroom

CYLINDER PRESS

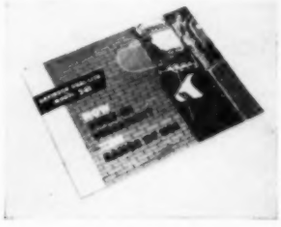
The Original Heidelberg Cylinder 21 in. by 28 in. press is described in a four fold bulletin released by Heidelberg Eastern, Inc. The Heidelberg Cylinder can also be used for embossing, hot embossing, die cutting and carbon ink printing. Specifications of the press are given and standard equipment is listed. The various features of the press are described and illustrations are included. For a copy, please mention PEE No. 177L in your request.

INK AGITATOR

A four page bulletin is descriptive of the Ortleb Ink Agitator manufactured by Ortleb Machinery Co. In the bulletin the agitator is described and is illustrated on various presses, such as the Kelly B, the Miehle horizontal and vertical, the Miller Hi-Speed and the Harris Offset. For a copy, please mention PEE No. 178L in your request.

DUAL-LITH BROCHURE

A 10¾ in. by 8¾ in. brochure is used to describe the range of usage of the Davidson Dual-Lith Model 241 press by Davidson Corporation. The two-color brochure is well-



illustrated. Described are the 2-cylinder principle and removable segments of the press, which underlay many of the features of the unit. Also described are the new Continuous Load Friction Feeder and Receding Pile Jogger which can be attached to the Model 241. For a copy, please mention PEE No. 184L in your request.

HORIZONTAL CYLINDER PRESS

The Banthin 13 in. by 20 in. Horizontal Cylinder Press is the subject of a four page, two color brochure released by Banthin Engineering Co. A list of press specifications is included. The various features such as feed and delivery tables, lubricating system, and ink distribution system are described with illustrations. For a copy, please mention PEE No. 179L in your request.

Miscellaneous

CONVEYOR MANUAL

A technical manual containing data needed to engineer the Tipp Cable-Way conveyor system has been issued by the Tipp Manufacturing Co. In the 36 page illustrated manual is included a diagrammatic plan for layout and dimensional calculations. There is a separate section on the Tipp-Tronic, an automatic safety controller that is constructed to provide warning and to prevent damage from abnormal load conditions on electrically driven conveyor systems. In other sections of the manual are included general descriptions of the system and price lists. For a copy, please mention PEE No. 188L in your request.

CHEMICAL AND SUPPLY LIST

A price list of its Graphic Arts chemicals and supplies has been released by Harold M. Pitman Co. The 160 page, plastic bound manual is divided into sections by index tabs. Some of the departments are: Chemicals, Processes, Supplies, Metals, Litho Plates, Ansco, Du Pont, Eastman, and Gevaert. Also included in the manual is an index of all products listed. For a copy, please mention PEE No. 189L in your request.

VARI-SPEED MOTODRIVES

A price list and specifications of Reeves fractional horsepower Vari-Speed Motodrive has been compiled by Reeves Pulley Co. The catalog, No. M-558, supersedes the fourth edition and became effective in April, 1956. Included in the 44-page catalog are ordering information, prices, dimensions and assemblies, and engineering information. The catalog is well illustrated. The Vari-Speed Motodrive is in sizes from ¼ h.p. to 40 h.p. and speed ratios up to 10 to 1. For a copy, please mention PEE No. 191L in your request.

Literature Request Coupon

After you have selected the literature described in these pages which you would like to have sent to you, please jot down the identification numbers on this coupon and mail to

PRINTING EQUIPMENT *Engineer*
1276 West Third St., Cleveland 13, Ohio

Literature Number (s) _____

_____

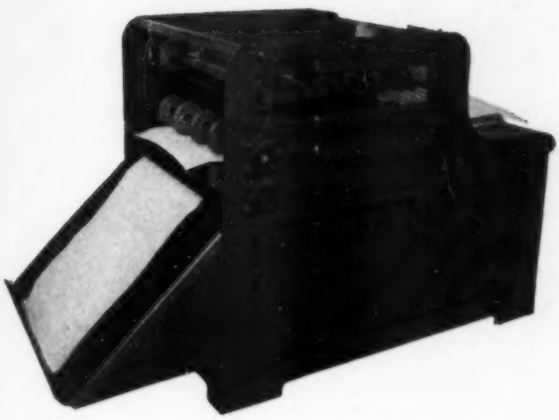
Your Name and Title _____

Company Name _____

Street Address _____

City _____ Zone _____ State _____

AUTOMATIC INFRA-RED STEREOTYPE MATRIX PRE-TREATING MACHINE



Two Banks of Parabolic Reflectors and Parabolic Heating Units give a true Infra-Red Heat

Units operate only while matrix passes through machine

Escalator action combined with adjustable infra-red treatment brings a true automatic matrix pre-treating machine to the stereotyper for the first time.

Controlled heat and speed gives you a perfect mat each time. Mats can be properly prepared in sixty seconds.

- No Condensation or Steam
- No Reflectors to Polish
- No Doors to Open
- No Replacement of Units

Floor Space 36" x 48" Net Weight 880 lbs.
Shipping Weight 1,100 lbs.
Price $2,100.00 f.o.b. Lynnfield, Mass.

STEREOTYPERS' PRE-SHRINK CURVED SCORCHER MODEL "MMM"

FEATURES:

Uniform Heat over the Entire Scorching Surface

Thermostatic Heat Control

Scorching Timer

Available with Aluminum Asbestos cover which eliminates heat loss.

Floor Space 31" x 28" Working Height 38"

Shipping Weight 230 lbs.

Net Weight 115 lbs.

Price — With Timer $520.00

Price — Without Timer $485.00

f.o.b., Lynnfield, Mass.

STEREOTYPERS' PRE-SHRINK AND FLAT MATRIX SCORCHER

FEATURES:

Thermostatic Heat Control Pre-Shrink Attachment No Slam Cover
The burners are the same temperature as the center of the Heated Scorching Area — Uniform Heat.

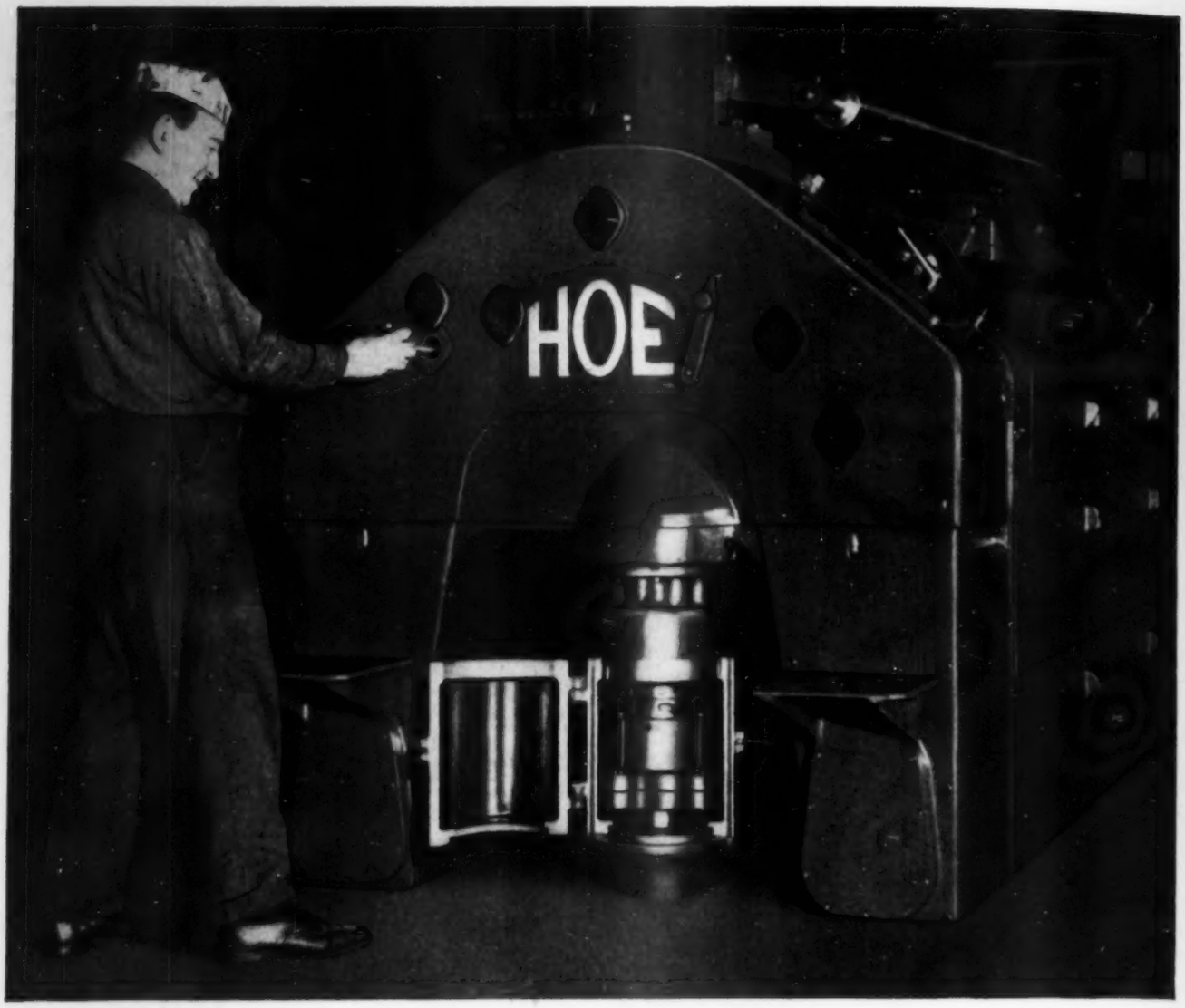
OPTIONAL:

Scorching Time Pre-Shrink Timer
Floor Space 31" x 28" Working Height 31" Net Weight 160 lbs.
Shipping Weight 250 lbs.

Price Model "FC" Alternating current without timer $275.00
"FS" Alternating current with one timer 310.00
"FSP" Alternating current with two timers 330.00
f.o.b., Lynnfield, Mass.

NEWSPAPER SUPPLIES AND EQUIPMENT
APS INC.

P. O. Box 421 Lynnfield, Mass. • American Publishers Supply, Inc.



Hoe's exclusive new reversing and oscillation control saves press make-ready time

This latest Hoe development provides a convenient and foolproof method for reversing either right or left hand printing couples or to vary ink drum oscillation by means of one simple tool.

A mechanical safety interlock not only indicates the direction of rotation of the couple but also assures proper positioning of the reversing components.

On couples for color where variable ink drum oscillation is provided, the adjustment is effected with the same tool from outside the unit housing and may be made while the press is in operation.

These features typify the success Hoe engineers have had in simplifying press operation for the pressman . . . cutting the time required for press make-ready . . . reducing printing costs.

Contact Hoe before you buy. For information, write to:

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO
BIRMINGHAM • PORTLAND, ORE.

ONLY:

OXY-DRY PRECISION ENGINEERING

GIVES YOU ALL THESE COMPETITIVE ADVANTAGES

GREATER PRESS SPEEDS
more impressions per hour

REDUCES REJECT SHEET WASTE
more deliverable sheets

PERMITS FULL PRESS LOADS
faster job handling time

USES LESS OFFSET POWDER
costs less to operate

FASTER SETTING & DRYING OF INK
less waiting time for next operation

ELIMINATES STATIC ELECTRICITY
"plumb-bob" jogging on press delivery

MUCH LESS SERVICE & MAINTENANCE
fill it...set it...forget it operation

ANY *one* of the above advantages would make OXY-DRY superior to any and all other offset prevention methods. Combined, they give the printing plant that has OXY-DRY equipment a tremendous competitive advantage that simply means more business, more profits and more satisfied customers.

If you want to increase the number of impressions per hour for every press in your plant, then you need OXY-DRY sprayers... write, wire or phone us today for more details.

OXY-DRY THE ONLY RIGHT INK OFFSET PREVENTION PROCESS

OXY-DRY SPRAYER CORPORATION

NEW YORK CHICAGO SAN FRANCISCO

1134 West Montrose Avenue, Dept. PE
Chicago 13, Illinois

GET IT..

OXY-DRY SPRAYER CORPORATION
1134 West Montrose
Chicago 13, Illinois PE-7

We are interested in OXY-DRY Sprayers:
send more information ☐
or your representative. ☐

Firm Name _____

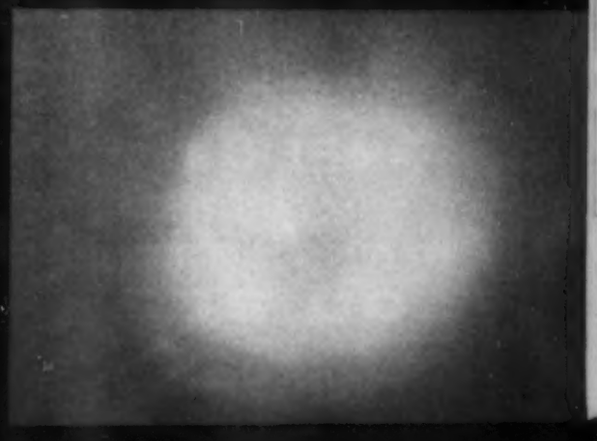
Address _____

City _____ Zone ____ State ____

Individual _____

FILL IT..

SET IT..



FORGET IT!

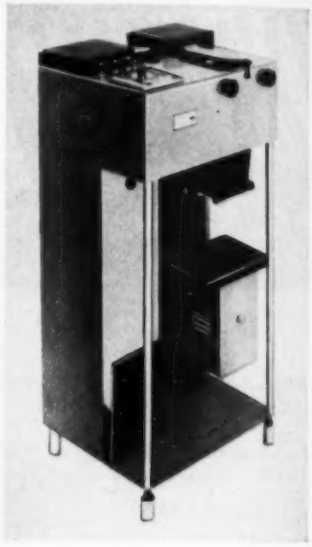
Equipment & Supplies

(Continued from Page 16)

Model 360, is 13¾ in. by 28 in. Model 230 will take a ½ in. wide panel; Model 360, ⅞ in. The machines, rated at 12,000 sheets of 8½ in. by 11 in. per hr., can also be used to fold stapled multiple sheets. They are both equipped with variable speed control automatic feed. Scoring is available as standard equipment. It is possible to score alone or to combine scoring and folding. Attachments permit slitting and perforating, either separately or in conjunction with folding. Modifications of four basic folds are set by thumb and micrometer screw adjustments. Folded sheets are delivered and stacked at the front of the machine. For further details, please mention PEE No. 149 in your request.

Optical Color Printer

The Precision Optical Color Printer announced by Curtis Laboratories is for use with roll color film for r.o.p. color. With the Curtis printer, 4 in. by 5 in. balanced color separation negatives can be made from 35 mm., 2¼ in. by 2¼ in., or 2¼ in. by 3¼ in. roll film color transparencies by projection and from 4 in. by 5 in. transparencies by contact printing. Featuring automatic operation, the floor stand Precision Optical Color Printer is provided with leveling screws for alignment. Operational adjustments are controlled from the top of the front panel, with enlargement operated by one knob and focus by the other. The built-in color filters are changed by using the three color-coded knobs on the panel. The printer is equipped with two lenses, turret-mounted for changeover to



provide magnifications from 1X to 6X. With the Curtis printer, enlargement of any portion of the subject or of the entire area is possible. Additional features include a light level that provides projection at high magnifications, and the edge-register for exposures, either by pin or stop method. The Curtis Precision Optical Color Printer utilizes electronic controls to determine exposure and correct faulty color balance. For further details, please mention PEE No. 151 in your request.

Filing Cabinets

The Colight K-D Filing Cabinets for storage problems with plates, negatives, and art work, are announced by Colwell Litho Products, Inc. The Co-

light Cabinets consist of five parts for convenient assembly. From 250 to 300 complete jobs can be housed in the cabinet in separate envelopes. Made of heavy Kraft stock, each

(*Continued on Page* 60)

Engraved on Imperial Zinc 110 Line Screen

I Use Imperial Zincs To Satisfy "Hard-To-Please Customers"

Many etchers have the answer for hard-to-please customers—Imperial Duraplate, a heavy duty, fast etching zinc with great buckling resistance, that catches dots and details with unerring accuracy. And like Imperial Regular, eliminates dirty bottoms and routs smoothly without chipping or breaking away. Many prefer the amazing, new fine grained, fast etching Vitaplate alloy for the A.N.P.A. Dow Process. Introduce your etcher to these three Imperial Zincs for hard-to-please customers.

THREE QUALITY ZINCS

Imperial

DURAPLATE VITAPLATE REGULAR

IMPERIAL TYPE METAL CO.

CHICAGO 50 • NEW YORK 7 • PHILADELPHIA 34

The Washington Star Prefers Headliner

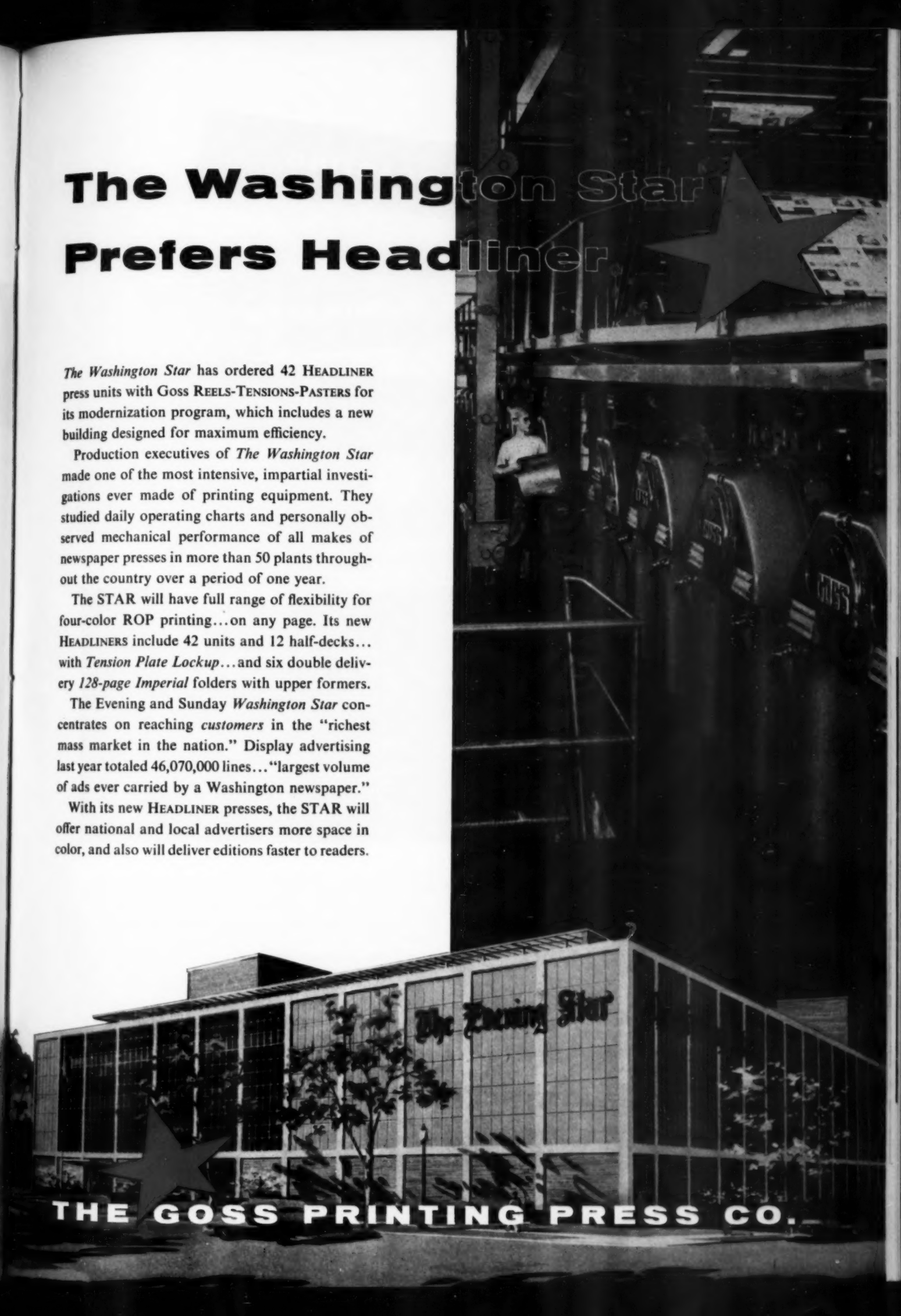
The Washington Star has ordered 42 HEADLINER press units with Goss REELS-TENSIONS-PASTERS for its modernization program, which includes a new building designed for maximum efficiency.

Production executives of *The Washington Star* made one of the most intensive, impartial investigations ever made of printing equipment. They studied daily operating charts and personally observed mechanical performance of all makes of newspaper presses in more than 50 plants throughout the country over a period of one year.

The STAR will have full range of flexibility for four-color ROP printing...on any page. Its new HEADLINERS include 42 units and 12 half-decks... with *Tension Plate Lockup*...and six double delivery *128-page Imperial* folders with upper formers.

The Evening and Sunday *Washington Star* concentrates on reaching *customers* in the "richest mass market in the nation." Display advertising last year totaled 46,070,000 lines..."largest volume of ads ever carried by a Washington newspaper."

With its new HEADLINER presses, the STAR will offer national and local advertisers more space in color, and also will deliver editions faster to readers.



ERRORS IN LINECASTING CANNOT BE ELIMINATED ...BUT THEY CAN BE REDUCED AN AVERAGE OF 33%

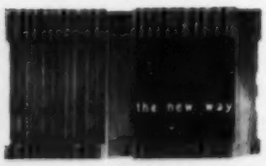
Matrix Contrast Service is a real eye-saver for linecasting operators—and a true dollar saver for newspaper publishers and job shop owners. Operators see clearly what they set—without eye strain and fatigue (an important factor at the end of the shift when the load is heaviest). Consequently, errors are reduced an average of 33%, which means more "o.k. takes" and less time wasted.

Matrix Contrast Service provides an economical, convenient plan to keep your linecasting matrix reference marks clean and highly visible in Black and White and/or brilliant new Colors.

Matrix Contrast Service pays for itself in many ways. Ask any of the many Matrix customers from coast-to-coast what they think of the Matrix contrast method and the resultant savings. Check any of our case history files, and you will join the long list of satisfied users.

Our skilled technicians and service crews backed by over 30 years experience, process your matrices in your plant without fuss, muss, and without interruption of your production schedule.

Send now for booklet giving complete information about this time-proven, established method. Learn about the new, economical "essential" maintenance plan today.



MATRIX CONTRAST SERVICE

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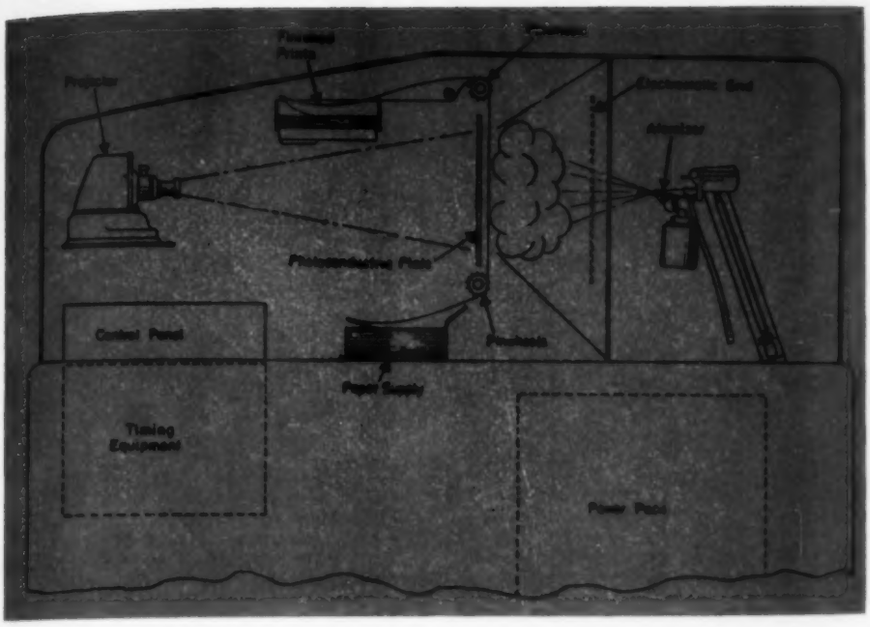

Fig. 1.—Side elevation diagram of impressionless printing press, alternatively called Electronic Reproducer or "smoke printer" for business forms work. Image of the copy to be reproduced is projected to a sheet of glass coated with a series of metals which have the ability to transfer light energy to electrical energy. This glass plate, in front of which the paper is continuously fed, contains a facsimile of the copy (either line or continuous tone) in the form of electrical charges rather than a visual light image.

Specialty Printing Technology At Carnegie Management Meet

By H. DAVID McKINNEY*

**Asst. Professor of Printing Management, Carnegie Institute of Technology.*

Printing Plant Executives were treated to a preview of what it will be like "to work in America in 1976" at the Printing Management Seminars held the last of April at the School of Printing Management, Carnegie Institute of Technology, Pittsburgh.

The exciting preview of the many rapid developments which will make *working* in the Graphic Arts *more productive* and *more profitable* was supplied by the 18 principal speakers at the three-day management forum held annually by the School of Printing Management as a service to Industry Sponsors and to others who have contributed to Tech's Instructional and Scholarship Funds, as well as to the more than 850 Printing Management Alumni distributed widely throughout the Graphic Arts.

And the encouraging theme echoed by most of the speakers indicated that in many areas of the Graphic Arts significant improvements in both equipment and methods already are here or, in some cases are just a few short years away.

More than 250 top-level printing equipment and printing plant executives listened to a fine array of speakers, some of whom were as follows:

High-Speed Letterpress Developments by Stanton C. Saunders, vice president, the Cottrell Co., assisted by a panel consisting of G. I. Koons, press engineer, R. R. Donnelley and Sons, and Alex Dittler, president, Dittler Brothers, Inc., Atlanta, Ga.

The Significance to Management of Developments in Platemaking by Gradie Oakes, president, Process Color Plate Co., Chicago.

Electronics and Automation in Printing by Kenneth R. Burchard, assistant dean, Carnegie Tech School of Printing Management.

Packaging, the Fastest Growing Segment of the Graphic Arts Industry, by Frederick W. Leinbach, vice president, Riegel Paper Corp.

Plastic Packaging Materials—Source, Use, Printability, by W. B. Tibbets, Development Dept., Bakelite Co., Div. of Union Carbide and Carbon Corp., and John Roser, Graphic Arts Div. manager, Milprint, Inc., Milwaukee, Wis.

Problems of the Medium Sized Plant, by A. L. Cantini, general manager, Holsing Lithographing Co., assisted by a panel consisting of J. B. Ashwell, vice president, The Equity Press, Inc.; C. L. Rapp, sales manager, Offset Reproductions, Inc., and R. E. Wood, president, Wood Press, Inc.

Large-Edition Letterpress Magazine Production, by Joseph C. Bronson, assistant to the superintendent, Curtis Publishing Co.

Sales Vitality and Initiative, by Ellsworth Geist, sales promotion manager, S. D. Warren Co.

Benjamin Franklin and the Modern Printer, by J. R. Jackman, president, Rumford Press, and president, Printing Industry of America.

The Carnegie Printing Management Seminars serve the vital need of keeping Graphic Arts executives informed of the tremendous improvements made each year by competitive and allied processes with which they may not maintain close contact.

Impressionless Press

This year being the Franklin Year, it seemed significant to ask leaders of selected areas of the Graphic Arts to report on progress made in their respective fields to date; recent improvements in equipment and methods currently in use and still further developments now in the planning stage.

Commenting that "we make progress slowly" in the printing business, Kenneth P. Morse, executive vice president and general manager of the Standard Register Co., Dayton, O., pointed out that few *basic* changes have been made since Franklin's time. Although all processes have been refined and considerably speeded up and improved, printing still relies on mechanical pressure—in most cases tremendous pressures equivalent to thousands of pounds per square inch, requiring massive frames and structures to house the delicate precision machinery necessary for today's high-speed, high-quality printing.

Stimulating the curiosity of his audience with a mention of a "printing press" built by Standard Register Co., requiring no heavy metal parts, Morse went back to Franklin's day to demonstrate that the impressionless press, while almost 250 years in the making, is within 5 or 10 years of widespread, practical use —in fact, he said, it has been built, is running, and is currently producing work in the laboratory.

This impressionless press—the Electronic Reproducer (more popularly known as the Smoke Printer) —might be said to have had its origin more than 200 years ago in three of Franklin's many and varied areas of activity: first, and foremost, he was a printer; secondly, he developed the copy press, the world's first business machine; and thirdly, his kite and key experiments contributed significantly to the development and use of electricity.

With these three elements William C. Huebner began experimenting a number of years ago to develop a process which would print through the use of electricity instead of mechanical pressure. The demand for such a process has been growing in recent years, due to the inability of existing printing methods to keep pace with the speedy output of information supplied by today's lighting calcultors and business machines, and other advances in the graphic arts field.

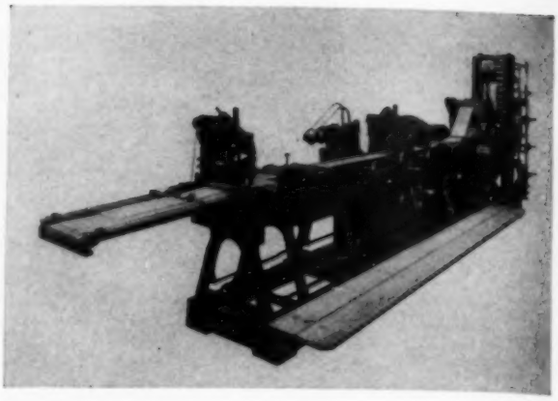

Fig. 2 — New Era Unit Setcollator.

Combining the three selected interests of Franklin, Huebner developed a method of placing ink on paper by electrical attraction rather than by mechanical pressure, and the impressionless press was born.

Huebner's experiments and patents in electronics were acquired by the comparatively recently formed Huebner Company, of which Morse is president, and have been made available by the new company for licensing for application in all areas of the Graphic Arts industry.

Immediate application was found for this startlingly new process by the Standard Register Co. in two phases of its operation which consists largely of supplying business forms and methods to industry.

It replaced the method of coating one-time carbon paper at Standard; application of carbon material electronically provides the desired lighter coating of carbon preferred for one-time carbons, does it faster, and will work on any kind of paper. The electronic method of application has provided such high speeds of operation, in fact, that a new problem has arisen: How to keep a sufficient supply of carbon material in the chamber, commensurate with the rate at which it is consumed.

The second immediate application of the Huebner electronic method of attracting ink to paper was the Electronic Reproducer, in the form of a duplicator (Fig. 1). This machine, now operating for a limited, specific purpose, is capable of producing multiple copies of 8½ in. by 11 in. sheets at the rate of 3600 per hr., and at a tenth of the cost of the conventional, pressure-type duplicators.

The Electronic Reproducer works directly from copy, either by reflected or transmitted light, without necessity for any intermediate steps such as mechanical plates, developing, or fixing. The image of the copy is projected to a sheet of glass which is coated with a series of metals which have the ability to transfer light energy to electrical energy. This glass plate, in front of which the paper web is continuously fed, contains a facsimile of the copy (either line or continuous tone) in the form of electrical charges rather than a visual light image.

In a chamber facing the charged image, pigment of the desired color is atomized into particles finer than the finest grain in present-day photographic emulsions, and sprayed through a high voltage field where each particle is electrically charged opposite in polarity to the electrical image on the glass plate.

The difference in polarity causes the plate to attract the charged particles of pigment much in the manner in which a magnet attracts metal filings. Because the paper web stands between the plate and the pigment particles, it interrupts the flight of the particles which become embedded in the paper to a depth dependent upon the amount of electrical charge. Because the glass plate is charged in intensity depending directly upon the amount of light reflected from or transmitted by the copy, it attracts pigment particles in direct proportion to the degree of intensity existing in each element of the original copy.

By the use of pigment particles finer than the grain of a photographic emulsion (pigmented powder, rather than printing ink as such, has been used because of its extreme fineness) it can be seen that reproductions of continuous tone subjects, without a halftone screen, may be made to capture all the details of the original—at the rate of 3600 per hr., on any kind of material and without costly preliminary steps.

When asked the cost of such a machine, Morse explained it would be difficult to determine since the Reproducer is not yet in production; he indicated, however, that its application "would be, possibly, somewhere in six to seven-thousand dollar field."

In view of the fact that business machines and computers are demanding methods of reproducing information output at speeds commensurate with their own lightning operations, Morse predicts it is inevitable that

Fig. 3. — Webendorfer Continuous Form Collator used for collating multiple business forms.

such electronic duplicating machines will open the way to a completely new era of impressionless printing—probably within the next 5 or 10 years.

In speaking of totally new concepts in Graphic Arts processes, Morse briefly described another series of patents held by the Huebner Company—for a new type of phototypesetting machine. While the basic patents are now more than 15 years old, he describes the process as a new concept in that it is designed to furnish composition to the printer in the form in which he needs it: not by character, not by line, but *by the page.*

Stating his personal opinion that present day phototypesetting machines are on the wrong track because they set by character and by line, Morse explained that Huebner had completed a working model of his page-at-a-time phototypesetter 15 years ago. All that limited it at that time was the memory device which of necessity had to be mechanical because electronic memory devices were not then perfected to the extent they are today.

With the tremendous strides made in recent years in electronics, the Huebner machine awaits only electronic application by some interested manufacturer to become a significant factor in the field of phototypesetting, said Morse in concluding.

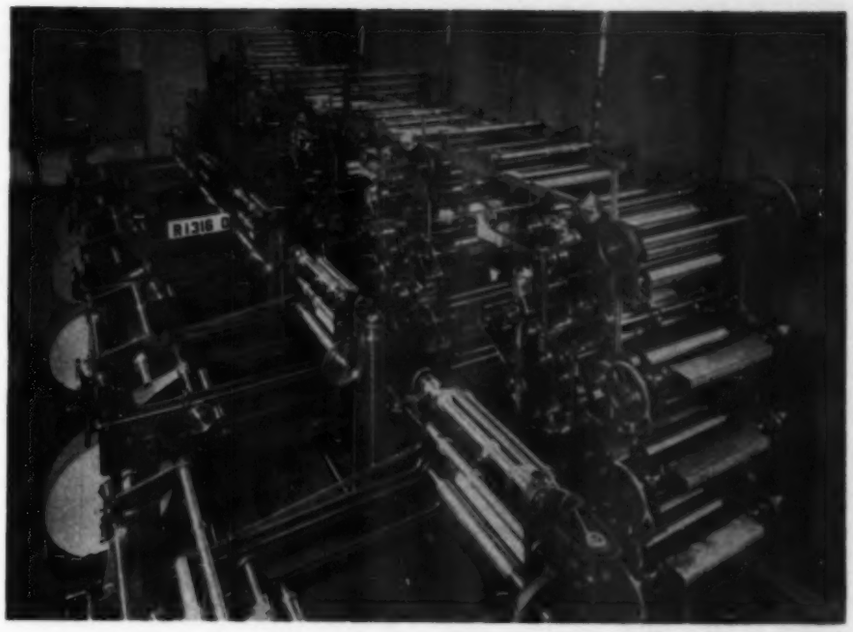

Fig. 4.—Meisel In-line Multiple Part Form Press which prints five rolls of paper interleaved with four rolls of carbon.

Keep Up with Developments

Declaring that the only real romance in the platemaking business is the romance of making money, Gradie Oakes, president of the Process Color Plate Co., Chicago, stated that new developments in this field occur so fast that "we never quite catch up with the one just passed before a new one comes along."

"But," he announced at the outset, "I'm not going to talk about platemaking 20 years from now—I'm going to talk about things you can take back and put to work in your own shop tomorrow morning."

Oakes then proceeded to discuss the type of common-sense procedures that make any good business better.

"No process waits while the others catch up," he said, by way of any impatient answer to those who would complain about the lethargy of letterpress in "catching up" to the other processes. "Let's not lull ourselves to sleep with the idea that there's going to be a miracle—the day of miracles is over."

Letterpress printers and photoengravers have got to get in there and do something about it, he said, indicating that one of the best ways to discover new methods and improve the old ones is to "give the young men their heads—you know, these guys that are so green they don't even know enough to know that they can't do something." Then, he continued, in their ignorance of the so-called limitations, they go ahead and try, "and darn if they don't end up doing it!"

The old time printer is in a rut, according to Oakes; in looking for a way to solve a new problem he too often relies on the old, time-tested methods and procedures instead of taking a look at the *result* he wants, then setting about to discover what kind of steps (new or old) he must take to end up with that result.

The solving of new problems, and the improvement of old processes requires ingenious thinking, intelligent application of sound principles, and knowledge. These things, he indicated, come from experience—time on the job. But we don't have as much time as we used to. He went on to point out that not too long ago we used to work 54 hrs. a week; then it started moving down to 48, and then 40. "And now we're only working 35 hours. with still more time taken out for coffee breaks.

"We just don't have enough time left in this business to learn everything we need to know—that's why we have schools like the Carnegie Tech School of Printing Management where boys can learn about their industry from the ground up, slowly, without the pressure of day-to-day business; where they can acquire a solid, basic understanding of both theory and practice that will serve as a sound background on which to build and improve when they get to work.

"With the continual build-up of pressure, and with the gradual reduction in hours, "now we even have to have a psychiatrist come in every once in a while to tell us how to get along with each other.

"But," he concluded, "I don't know if anybody ever thought about how well everybody would get along if everybody just knew his job."

Research and Education Have Helped Develop Lithography

Developments in the fast-moving field of offset lithography were reviewed by Michael H. Bruno, research manager of the Lithographic Technical Foundation, Inc., as he pointed out that lithographers recognized their responsibility for research and education within their own industry long before any of the other processes. "This," he said, "could account for the way lithographic sales have increased at a greater rate than the other processes."

In explaining the role of LTF in lithography's outstanding rate of development over the past 30 years, Bruno pointed out that "two types of research have helped lithography forge ahead. One is the development of new materials and equipment, or the improvement of existing ones like the development of new coating solutions, presensitized plates, motor-driven arc lights, phototypesetting, new lenses, etc. This type of research is being handled capably by the manufacturers of our equipment and supplies.

"The other type of research is systematic investigation of the basic principles of the process so that the causes of troubles can be eliminated, like the studies of desensitization of plates which led to the work on surface treatments and the elimination of scumming; the studies of blinding which led to work on non-blinding lacquers an dthe end of blind images; the development of the Sensitivity Guide; the Paper Hygroscope; Pick Tester; the Inkometer, etc.

"This second type of research cannot be done by our manufacturers and suppliers. Other than not being as profitable as the first type, it requires a scope of knowledge of the industry and its problems not usually found in any one manufacturer's field. Anyway, the investigation of the basic principles of the process is really the responsibility of the industry as a whole, and it would not be fair to expect any one manufacturer or group of them to invest much time or money doing it on their own."

With all the significant developments made since the inception of LTF in 1924, it is the more recent improvements to the process, developed during the past 15 years that

"have put lithography into the big time and promise to keep it there."

One of the most important photographic developments in this recent period has been the use of the contact screen which "not only makes it easier to produce halftones, but produces better halftones." An even more recent halftone method is the simplest of all: The Kodak Autoscreen Film which has the halftone screen pre-exposed into the emulsion.

Bruno exhibited a press sheet containing four halftone reproductions of the same subject, each produced by a different method. While all reproductions contained about the same tonal range, the reproduction from the glass screen had the poorest resolution of detail. The halftone produced on Autoscreen film showed excellent resolution and an exaggeration of highlight contrast. The halftone produced by the conventional contact screen showed improved shadow detail but was slightly flat in the highlights. The halftone produced by the new highlighted magenta contact screen process showed the best range of tones and came closest to the original, providing good shadow detail, good highlight detail, and good resolution.

Because of the tendency in this country to train mechanics rather than hand craftsmen, Bruno heralded the developments providing for the increased use of photographic masking and electronic scanning which have increased the use of color and have greatly improved the quality of lithographic color reproduction. Electronic color correction is here to stay, said Bruno, because more can be done electronically than photographically.

However, as long as we must approach each job individually, and handle it as a separate problem, we are not taking full advantage of the tremendous potential available with the electronic method of color separation and correction—electronic scanning should be made automatic for maximum efficiency. And Bruno pointed to a promising future of more and better color in lithography when he indicated that, as more is learned about the requirements of lithography, and greater controls are achieved, we are steadily approaching the day of automatic electronic scanning, placing more responsibility on the machine, and less and less on the judgment of the operator.

Entire new markets already have been opened to color with the introductions of the Eastman Three Color Process—"the acme of integration of a masking technique." With the recent announcement by Kodak of a simple method for making a black from the three-color separations, what started out to be a simple three-color process is now a four-color proecss, making it possible for many plants which never had a color department before to get into color and "turn out very presentable work without too much effort."

In the face of the many impressive photographic developments, Bruno pointed with understandable pride to the tremendous recent developments in platemaking as the most significant single contribution to the amazing growth of lithography since World War II. Positive control has been achieved for the lithographic plate which, only 15 years ago was the biggest single source of trouble in the whole lithographic process. The LTF Sensitivity Guide has provided control over tonal values; improved surface treatments and better techniques for desensitization have provided better control of the non-printing areas, improving quality by reducing the amount of water required; ink receptivity of the image areas has been improved by the introduction and use of the new non-blinding vinyl lacquers.

Bi-metal plates have opened up entirely new markets of read-line publishing and long runs that were never available to lithography before. Presensitized plates have been made possible by the discovery of sensitizers, other than bichromates, that are not affected by temperature and relative humidity. Presensitized plates, now well established in the industry, "can be responsible for both an increase in production and an improvement in quality."

Looking ahead to still further improvements in store for lithographers, Bruno highlighted some of the projects currently being developed at the LTF Laboratory: Evaluation of masking techniques in an effort to utilize the best features of each of the many methods now in use. A color chart with four tones of each color and black for use by dot etchers as a guide to determine what tone values are needed in positives or negatives to produce certain colors and tone values on the press; this chart will be available soon in the form of a set of negatives or positives from which a lithographer may make his own plates and run his own chart, on a 22 in. by 29 in. sheet, using the techniques and colors which will be used on the production jobs for which the chart will serve as a guide.

Perhaps the most exciting of the many projects now in process at the LTF Laboratory is the development of a device to fit on the press which will tell the pressman immediately when trouble or imbalance of any sort begins to develop—long before it would normally come to the pressman's attention in the form of impaired quality or press stoppage.

"Right now if a pressman is running too much water, it takes 4 or 5 min., or 300 or 400 sheets, before he can see the effect. By the time he makes the correction there might be 300 or 400 more sheets before the effect of the correction shows up, and generally he goes too far. This hunting and seeking is the main cause for continual variation in color throughout a run. With the right instrument the pressman will be able to detect these things as soon as they start to happen, and he can do something about them before they ever show up on the sheets."

In concluding, Bruno pointed out that new and important developments are continually being worked on in research; that, as they are completed, each adds still more to the continuing improvement of the quality of lithography; that, to get the most out of these new developments, research must be supported, and the results of research must be accepted and used. "Then, and only then, can the full benefits of research be achieved."

Business Forms—Tools of Management

In discussing a $500 million specialty industry with complex equipment requirements Wallace B. Sadauskas, purchasing agent of Union Carbide and Carbon Co., began, "No physical activity goes on in our modern industrial age without a piece of paper moving along to guide it . . . that piece of paper, generally, is a business form."

Every business, including the smallest one-man operation, uses business forms of some description. And the giants require forms in such quantity that they may spend a million dollars or more annually on forms purchases alone—consuming anywhere from a few hundred to several million each of as many as 30,000 or more *different* forms every year.

Saleswise, the forms industry is no longer simply another area of the Graphic Arts; to stay in business today the forms printer uses industrial engineers and methods experts as salesmen. To get a sizeable share of this huge market—and some of the larger forms printers consistently hit the $100 million mark—the salesman must first set up a complete methods procedure consisting of the usage of the forms before he can pick up the printing order.

Once the printing order hits the plant it generally requires plenty of ingenuity on the part of job planning specialists to accomplish the tailor-made multiple part form, even using the highly versatile specialized equipment which has been developed by this industry for its own use.

For example, a fan-fold continuous form, consisting of five or more parts of varying widths may be put on a high-speed rotary press with a 100 in. web for printing in several colors, numbering, perforating, folded parallel to the web direction as many as a dozen times, interleaved with carbon, and finally zig-zag folded at right angles to the web for delivery as a unit-sized package containing as many as 500 or more individual sets for continuous use on a typewriter, tabulator, teleprinter, Teletype, or Addressograph.

The complexity of machinery needed for this specialized industry causes many of the forms printers to design and build their own machines. For example, The Snapout Forms Co., Chardon, O., produces multiple part unit sets—popularly known as "snapouts"—on a high-speed rotary which feeds simultaneously eight 17 in. paper webs and seven 17 in. one-time carbon webs for multicolor printing on each web, numbering, imprinting, perforating in both directions, strip pasting into sets, delivering trimmed-out units ready for packaging and shipping.

For forms requiring more than eight parts, Snapout Forms Co. may run single webs on its Webendorfer 17 in., Hamilton 22 in., or Ashton 28 in., or multiple components on any combination of their 3-web, 4-web, 6-web, or 8-web rotary presses; production from the various presses used for any one multiple form job is then re-reeled at the delivery and reloaded on a multiple web collating machine such as the New Era unit set collator (Fig. 2) or the Weben-

(*Continued on Page* 46)

Important Mechanical Committee Members at Dallas (Tex.) Mechanical Conference—Left to right, they are: Joseph E. McMullen, vice president, *The Milwaukee Journal;* Richard E. Lewis, ANPA Mechanical Dept. manager; William Dwight, ANPA president and president of Holyoke (Mass.) *Transcript-Telegram;* and J. Harold Mintun, production manager, Pittsburgh *Press* and chairman, ANPA Mechanical Committee.

New Equipment-Processes Reported at Dallas (Tex.) Joint Mechanical Meeting

By STAFF WRITERS

The American Newspaper Publishers Assoc. Mechanical Conference, held jointly with the SNPA (Western Div.) Mechanical Conference, June 4-6, at the Statler Hilton Hotel, Dallas, Tex., can most adequately be described as a work conference. The meeting drew 1246 registrants.

The best evidence of the importance of new developments in the newspaper production field, said J. Harold Mintun, production manager of the Pittsburgh (Pa.) *Press* and chairman of the ANPA Mechanical Committee, was the large attendance at the opening and closing sessions of the conference. Attendance at each session of the conference was very good, too. Also in conjunction with the ANPA Conference, a large display of newspaper equipment and supplies was held. Many members attending the Conference felt that this exhibit was the best in ANPA history.

Sunday evening, June 3, the Dallas *Morning News,* Dallas *Times Herald* and the Dallas *Wall Street Journal* hosted the Conference at a barbecue and rodeo. It was difficult to tell who was most surprised: The hosts at the large number of people who turned out for the event or the "Yankees" at the fine show put on for their benefit.

Dealey Welcomes Executives

E. M. (Ted) Dealy, president and publisher of the Dallas (Tex.) *Morning News,* welcomed the members of the Conference to Dallas at the opening session. William Dwight, president and publisher of the Holyoke (Mass.) *Transcript-Telegram* and president of the ANPA, gave the keynote address of the meeting. Dwight said in part: "We are on the threshold—yes, we are crossing it—of a new era in the production of our newspapers. Not since the introduction of the Linotype machine back in the 1890's has there been such interest in and concern for finding new ways and means of putting out daily newspapers.

Hobbling New Equipment with Restrictions is Frustrating

"New methods have arrived, more are on the way. Our newspaper mechanical world is afire with new ideas and hopes and dreams. Just look at your ANPA Research Institute, talk with the men there who are exploring the realm beyond our present horizon. It is thrilling to hear their story. But it is frustrating for those who are working on them and for us who have been given new tools in recent years to find we are being hobbled with restrictions on their use.

"Our manual typesetting machines, as devised before the turn of the century and improved upon moderately, can be operated without restrictions. Had the forces, which wanted to limit them when they first were brought out, prevailed, we wouldn't have the number of skilled and prosperous workers in our business today nor the great newspapers. And if production limits are kept on the machines that are being developed now and will be in the future, the next generation will not speak as kindly towards us as we should about our predecessors."

Lewis Urges Member Use

Richard E. Lewis, manager, ANPA Mechanical Department, spoke briefly. He reminded ANPA members present that the Mechanical Department,

Research Men at Dallas (Tex.) ANPA Mechanical Conference — Reporting from ANPA's Research Institute Laboratories in Easton, Pa., these men discussed latest research developments. Left to right, they are: Lee Gardner, Sherwood Mabus, Technical Research Director Roy W. Prince and Frank Stanczak.

with its research experience into all types of newspaper production problems, stands at the call of every ANPA member newspaper. The research and planning done for one member may yield just the information desired by another. But the initiative in asking for the information rests with the ANPA member newspaper since it is impossible to broadcast all the information to all papers. Thus the ANPA Mechanical Department is in a real sense a clearing house of information on developments in the newspaper mechanical departments for ANPA members.

Build an Organization Eybers Tells ANPA Meet

After the opening ceremonies had been concluded at the ANPA-SNPA (Western Div.) Mechanical Conference, Dallas, Tex., June 4, the first speaker to be introduced was William S. Sadler, jr., Sadler and Associates, Chicago, who spoke on *Human Evaluation and Business Profits*. Sadler did not claim to have the final answer on this critical problem in the newspaper mechanical department—proper selection of personnel for foreman and superintendent positions. He said: "We do have some tools, and we do have some facts which help management to make up its mind and which contributes to the final answer." Things Sadler claimed his testing could do: Tell whether the subject is a normal man or a screwball; tell whether a man likes his job or not; tell what a man's level of intelligence is; tell whether the subject is an extrovert or an introvert; and tell how much drive or ambition the subject has. Things Sadler said his testing could not do: Measure job knowledge; measure moral honesty; estimate social acceptability; estimate a wife's influence; measure personal appearance; and measure the boss for possible conflict with the subject.

Building An Organization

Harry Eybers, production manager, Washington (D.C.) *Post & Times—Herald*, spoke on *Building An Organization*. In my opinion, Eybers began, building an organization deals nearly 100% with the personnel relationship between the employees and management. Every newspaper publisher or general manager would prefer a warm, friendly relationship between employees and management instead of constant labor rifts. Labor rifts are usually bred among suspicious, unhappy, unappreciated and unrecognized employees.

Starting to rebuild an organization is like a doctor trying to cure the sick. One has to find out why the organization needs building, or why it is sick. I have always found the reason the same, Eybers said—the employees just wanted to be treated like human beings. They wanted to become a part of the organization, not just pieces of machinery.

There are many reasons for misunderstanding but the one that crops up most is misrepresentation by management's personnel who act as liaison people between top management and its employees. Production managers, assistant production managers, and foremen can be included in this category.

The reasons puzzled me, Eybers continued, until I started digging into it and found them all alike. In nearly every case these middle-management people turned out to be phonies, grossly incompetent or inexperienced. They painted these bad pictures of their employees as a defensive measure. They found it much easier to blame the employees and labor unions for production failures and high cost than to admit their own shortcomings.

ANPA Mechanical Dept. Management Team—At left, Asst. Mgr. Fred Brickner; at right, ANPA Mechanical Dept. Mgr. Richard E. Lewis.

"My methods of building an organization and handling personnel are really very old-fashioned," Eybers said. "I have been laughed at many times because I have said that I operate strictly on the old Biblical philosophy of 'Do unto others as you would have them do unto you.'

"I have found employees in all parts of the country equally competent and willing to turn out a good day's work," Eybers continued. "I must also tell you that wherever I have gone I have found what I call my 'ten-percenters.' My experience has proved that regardless of what you do for your employees you will find about 10% that you will never satisfy.

"Keeping those 'ten percenters' out of the limelight is what you have to conquer if you are going to build an organization. Unhappy employees will stop and listen to these 'ten-percenters'. Happy, satisfied employees will laugh them down and push them back in a corner where they belong. I don't mean it's necessary to buy the happiness of these employees with high wages and gold-plated equipment," Eybers continued. "Just treat them like human beings and let them be a part of your organization."

No production manager or mechanical superintendent can build alone. The key to this situation is a good team of foremen or supervisors. "To form such a team and keep their respect it is necessary that you set an example for them and actually practice the methods you set out to operate by," said Eybers.

"When I get my team of foremen pretty well organized I then have some thorough discussions of my particular type of operation. First, all the foremen understand they must live up to their respective union contracts at all times. Second, I encourage my foremen to prevent trouble by solving the little misunderstandings before they grow and get out of hand.

"I encourage my foremen to go to their respective union chairman and invite them to report to him any complaints or little problems that can be solved by them before they grow into grievances that involve the entire chapel. My foremen are allowed to do their own thinking and make their own decisions. We have only one rule that I insist on. I will not tolerate any disputes between the executives of the various departments on the floor. I also have a very good understanding with the foremen as to their duties and responsibilities in producing a newspaper. I boil it down to this—an engraver is hired to turn out cuts to the best of his ability and as fast as possible; printers are to set type and ads and make up pages; the stereotyper is to mold forms and turn out plates; and the pressmen are to print newspapers for the mailers to dispatch.

"During the operation in our plant the pressroom foreman can ask for new plates and he gets them without a lot of arguments. The stereotype foreman can send back as many plates as he wants without an explanation to the pressroom foreman, and so on. If any department abuses this privilege it is discussed and settled at the weekly foremen's meeting we have. I conduct the meeting and this is where we encourage all criticism and ideas for improvement regardless of what department might be involved," Eybers said.

"In closing," Eybers concluded, "I want to again call your attention to the three things that are a must if you are going to build an organization. First, you must have management's full confidence and this takes a real selling job that can be done only by you. Second, you must have a good team of assistants and foremen because it is impossible to do the job alone. Third, you must have a friendly relationship between management and your employees. Keep them saying nice things about the office or the 'ten percenters' will soon be in the saddle."

Questions and Answers

During the question and answer period in the first session, W. Watson Southam, vice president, Southam Newspapers, Ltd., Ontario, Can., asked Eybers whether he himself used the tests of Sadler & Assoc. or similar tests. Eybers said that most personnel now on his paper had been tested and that the tests were becoming more generally used. However, he continued, he still relied to a great extent on his own judgment and watching to decide whether or

not a man would even be tested for a foreman's position.

M. T. Parkinson, composing room foreman, London (Ontario, Can.) *Free Press,* asked Eybers what corrective measures should be taken for a foreman who was entirely too abrupt in his handling of his workers. Eybers said he would try to get close to the man first. Stand close by; try to set an example of proper handling and finally, if example didn't turn the trick, ask the man how he would like to be talked to in the way he was talking to his workers.

Horace R. Therien, mechanical superintendent, Fairchild Publications, Inc., New York, N.Y., asked Eybers what he thought the reaction would be to elevating a "ten percenter" to a foreman's position. Eybers replied that the "ten percenter" would have to be converted before he would even be considered for such an advancement.

William E. Keightley, mechanical superintendent, Buffalo (N.Y.) *Evening News,* asked what Eybers would do for a foreman who had abdicated his authority. Eybers replied that the usual cause for this was too much meddling from outsiders, usually outside the production departments. Eybers again stressed the necessity for the mechanical superintendent to have sole authority for what happens in the production departments, and to have the sole power to issue orders in the production departments, excepting, of course, the general manager and publisher.

Alex Primm, production manager, St. Louis (Mo.) *Post Dispatch,* asked the meeting as a group whether anyone had had actual experience with the testing of personnel, such as described by Sadler. Leven T. Deputy, production manager, Dallas (Tex.) *Morning News,* said his firm had found Sadler's "guidance and reports most beneficial. But it won't solve all your personnel selection problems. There's still the question of the man's competence in his job." Jack M. Waite, mechanical superintendent, Hamilton (Ontario, Can.) *Spectator,* said that in his experience such testing was "right about 90% of the time." Vernon R. Spitaleri, research director, Miami (Fla.) Knight Newspapers, said the results of such testing have been helpful, though the further up the organizational chart the testing is given, the more difficult it is to determine attitudes and aptitudes. Glen R. Hutchinson, production manager, Los Angeles (Calif.) *Times & Mirror,* said that everyone from foremen up had now been tested on his newspaper and that four or five candidates are tested for any foreman's promotion. This gives a lift in morale to all concerned even though they don't get the particular job under consideration at that time. He, too, said the tests were about "90% accurate."

Randall Barton, production manager, Phoenix (Ariz.) *Republic & Gazette,* asked Sadler whether all or only some personnel should be tested. Sadler replied that his organization recommended selecting from 6 to 12 persons because their qualifications were well known, have these men tested, and judge the results. Then, it was not necessary to test all personnel within an organization, but it was recommended.

Earl R. Weiskittel, pressroom superintendent, Youngstown (O.) *Vindicator,* asked Sadler whether or not an individual could take these tests. Sadler said that his organization was not set up to give tests to individuals anywhere except in Chicago. However, anyone who could come to Chicago could be tested there.

Smaller Cities Executives Talk About Problems

The Smaller Cities Session held on Monday night, June 4, at the combined ANPA-SNPA (Western Div.) Mechanical Conference was attended by several hundred smaller newspaper mechanical and production executives. There was a considerable sprinkling of larger newspaper executives in the audience who seemed highly interested in the answers to the questions which were presented for discussion.

Chairmen of the session were: Charles A. Frederickson, Westchester County Publishers, White Plains, N. Y. and Joseph E. McMullen, Milwaukee (Wis.) *Journal.*

The discussion leader was Palmer Black, Amarillo (Tex.) *Globe-Times and News.*

Black was assisted by the following panel members: Composing room—Claude J. Thornton, Wichita Falls (Tex.) *Times and Record,* and A. R. Yarbro, Corpus Christi (Tex.) *Caller and Times;* Pressroom—Curtis F. Richards, Duncan (Okla.) *Banner;* Stereotype—Cecil J. Steinmetz, Little Rock (Ark.) *Arkansas Gazette;* Engraving—J. C. Sharp, Marshall (Tex.) *Messenger* (Fairchild) and Joseph L. Fahnart, Clovis (N. M.) *News-Journal* (Conventional); Machinist—John W. Lancaster, Ponca City (Okla.) *News;* Mechanical Superintendent—Carl Williamson, Baton Rouge (La.) *State-Times and Advocate;* Business Office—Clyde E. Moffit, Ft. Collins (Colo.) *Coloradoan.*

One of the first questions to come up was: ***Why should plates puncture the blankets at the cylinder openings?*** A number of causes for this difficulty were enumerated such as blankets do not conform to the cylinder diameter, the cylinder may be overpacked, the plates may be loose, worn or loose bearings could cause this difficulty, or the plate may be sprung on the chipping block. It was advised that causes for the trouble could be found by a process of elimination, paying special attention to the packing of the bearings according to the manufacturers' specifications and to the proper packing of the cylinder blanket itself.

The subject of dispatch or control rooms in newspaper plants together with the handling of cuts came up for discussion. Orel M. Harper, mechanical superintendent of the Tulsa (Okla.) *World and Tribune,* stated a new dispatch room was being installed in his plant. He described to some extent the new and modern furniture which was being furnished by Hamilton Mfg. Co. He said that all mats for advertisements are placed in an ad envelope with information about the ad printed on the envelope itself and then sent to the stereotype room. After casting, the stereotyper returns the envelope containing both mat and cut.

Rack for Ad Cuts

Clyde E. (Red) Moffitt, business manager of the Fort Collins (Colo.) *Coloradoan,* said: "Now, getting back to the small paper, I would like to describe a rack devised by John Barron, mechanical superintendent of the La Salle (Ill.) *News-Tribune.* This device consists of a piece of wood mounting base which is slotted part way through the base in a saw at suitably spaced intervals. The cuts and/or shell casts are placed each one in a slot in a vertical position and are placed from front to back according to size.

Gordon Dixon, superintendent, San Rafael (Calif.) *Independent Journal,* uses an envelope system for ad copy. Full information is contained on the face of the envelope when the ad is

JOHN PARK RETIRES FROM COMMITTEE

A standing ovation in appreciation of past accomplishments was given John W. Park, research director, Chicago (Ill.) *Tribune,* during the Mechanical Conference session in which he announced his retirement from the Mechanical Committee of the American Newspaper Publishers Assoc. The announcement came on the last day of the 28th Annual Mechanical Conference in Dallas, Tex., June 6. After 30 years on the Committee and 28 Conferences, Park was the last active member of the original Committee.

John Park was one of the big men of the ANPA Mechanical Committee. He was big in technical competence. He was big in his grasp of the mechanical problems of the newspaper industry, and in his foresight into their solutions. He was big in the caliber of his personal relationships. As a presiding officer at a session of almost every Mechanical Conference ever held, he proved himself fair, approachable, and willing to listen, even though it must have been difficult at times. For these contributions and more, Park deserves the wholehearted appreciation of all members of the ANPA.

It is hoped that John Park will continue to advise the Mechanical Committee and attend the Mechanical Conferences as a respected senior citizen. He will certainly continue to be needed.

to run on certain days of the week. A different color edge on the envelope is provided for the day or days on which the ad is to run in the paper. The ad man receives the envelope with the type, cut and dummy so he can go right to work. This eliminates pawing through a drawer containing a lot of loose cuts in order to find the proper one.

Someone wanted to know about the usage of a plastic molding blanket. Paul J. Blubaugh of the Lawton (Okla.) *Constitution and Morning Press,* said that one blanket in particular had been used for two years in his plant. It is washed occasionally with soap. However, in time it becomes too short for use after considerable handling.

W. E. Gibbons, production manager, Portland (Ore.) *Oregon-Journal,* offered a suggestion with respect to preservation of plastic blanket life. He said that cracking of the edge of the blanket has been overcome by binding the blanket with Scotch tape.

Someone wanted to know if anyone had experimented with printing a paper by dry offset. The answer was that information could be obtained from Rochester Institute of Technology, Rochester, N. Y., or Richard E. Lewis, manager, ANPA Mechanical Department, 370 Lexington Ave., New York 17, N. Y. would gladly furnish him the information.

Just "Plain Gook"

Don Shortell, production manager of the St. Petersburg (Fla.) *Times,* said that in order to keep curved plates from creeping on the dummy when mounted on the press cylinders that he had experimented with Armstrong's cold setting adhesive. The adhesive is applied with a brush to both the dummy and the plate and is allowed to air dry for 20 min. before joining the plate and dummy. In answer to a question about the adhesives, Shortell said, "it is just plain gook." In response to another question he said the magnesium plate (16 ga.) is separated from the saddle by throwing both plate and saddle into the melting pot from which the magnesium plate is recovered.

Needs To Get Rid of Lint

John W. Park, research director, Chicago *Tribune,* said that he had been working with dry offset for five years. He said he had secured a brilliant ink effect but on the rough newsprint paper (which he tells must be used) he can't get rid of lint on long runs. In other words, he is happy with the print but not with the length of run. His primary interest in this work is for printing newspaper supplements which could also be used by many small newspapers. Presently, he now gets 1/5 of the press speed which he expects to get and wants to be able to print from 46 to 50 thousand copies without necessity for shutting down the press to clean off the lint.

Does anyone feel they get a better reproduction from ANPA-Dow etched magnesium halftones than from the conventional etching method? The reply was that the cuts (zinc or magnesium) are practically the same and no difference is noticed in the print.

What can be done to increase the life of cutting rubbers? Someone said that they could be turned over but he did not recommend doing so. It is better to replace them. Keep the cutting knives sharp. The rubbers do not cost too much. George W. Kent, pressroom foreman, New London (Conn.) *Day,* stated he took the backlash out of the folder and the cutting rubbers now last five times longer than previously.

Fig. 1—The new Wood Standard Pony Autoplate Machine as it was displayed at the recent Dallas, Tex., ANPA-SNPA (Western Div.) Mechanical Conference. Statler Hilton Hotel, Dallas, Tex., June 4-6. This machine, which resembles in many ways the new Wood Heavy Duty Autoplate Machine, was designed with the needs and resources of the smaller city newspapers in mind.

ANPA Meeting Considers New Stereo Equipment

Manufacturers of equipment for the stereotype room had much to report to the joint ANPA-SNPA (Western Div.) Mechanical Conference stereo meeting, Tuesday morning, June 5, at the Statler Hilton Hotel, Dallas, Tex. Glen R. Hutchinson, production manager, Los Angeles (Calif.) *Times & Mirror-News,* and George F. Marshall, production manager, Portland (Me.) *Press Herald, Express and Telegram,* were co-chairmen of the session. Improved equipment and materials were reported by both the casting machine makers and stereotype mat producers.

William W. Henderson, R. Hoe & Co., Inc., led off the discussion of plate casting equipment by describing the M-A-N Plate Casting Equipment (for a description of the equipment and a diagram of the various operating components, see *Printing Equipment Engineer,* June, 1956, pages 103-104).

Among the advantages of this type of casting equipment cited by Henderson were: The plates are cast by forcing the metal under pressure into the mold parallel with the ribs under static pressure; once the mat is inserted and clamped into position, it need not be handled again for any number of casts; due to the direct connection of the casting box inlet with the metal pot mouthpiece, the liquid metal is never exposed to the oxidizing effect of the atmosphere and casting temperatures can be lowered accordingly. Also, this direct connection eliminates the tailpiece and the tails on the cast plates. Pins are supplied for clamping mats in this equipment which helps maintain accuracy of register in casting plates for color work.

Wood's Newest Autoplate

I. Tornberg, vice president, Wood Newspaper Machinery Corp., described his firm's latest addition to its family of stereotype equipment, the new Standard Pony Autoplate Machine. In many respects, the new Standard Pony Autoplate Machine resembles the new Heavy Duty Pony Autoplate, Tornberg said. Certain compromises were made in the automatic features in order to offer the smaller city newspapers a modern plate casting machine that can produce a plate per minute.

Features pointed out by Tornberg on the Standard Pony Autoplate: The shaving arch is lipped into the frames which are of one-piece construction and the bolts holding it in place are not depended upon to take the pressure from shaving; the redesigned cooling stand eliminates the need for lifting and lowering the cover found on the old style Pony Autoplates; a quiet and efficient V-belt drive is utilized between the motor and the drive for the saw and shaving mechanisms; water supply into the box, core, and shaving arch is

thermostatically controlled; while the plate is lifted into the arch by means of a handle, there is a spring follow-up which keeps a constant follow-up pressure on the plate while it is being shaved; the basic framing of the machine is a one-piece casting replacing the previous bolted two-piece frame; the machine is designed so that the stereotype metal chips fall into a pan which makes it easier to dispose of the chips than was the case when they had to be scraped out of the interior of the machine; the beveling tool is attached to the knife bar, so that it may be adjusted more easily than before; and the worm drive to the knife bar is ballbearing mounted, runs in oil, and is driven by the V-belt drive. Further, in conjunction with the new Standard Pony Autoplate, a new Pneumatic Pumping device can be furnished which can be attached to existing pumps or to the new Power Operated Metal Pump. Both devices include the same safeguards against double pours, pours without mats, and other possible misuses. If necessary, finished plates can be slid onto a Wood Automiller without lifting them. When equipped with the Pre-Registering Attachment, color plates can be trimmed in register on the Automiller before they are sent to the pressroom, by a gang of four long-life cutters which help ensure the uniformity in depth and spacing of pockets. Eight pockets are cut in a plate in less than 25 sec. A view of the new Wood Standard Pony Autoplate display at the recent ANPA Mechanical Conference in Dallas, Tex., is shown in Fig. 1.

Goss Stereo Equipment

Glenn Krueger, development project engineer, Goss Printing Press Co., opened his remarks on the Goss Plate Perfector and Tension Miller by saying: "The Goss Printing Press Co. is spending more on research than any other company in the field. Goss is spending 5% to 7% of gross sales a year in a product research program utilizing 16 engineers."

WHAT'S THE SCORE?

For several years we have heard and read about contact screens and their superior quality in halftone reproduction. It has been taken for granted more or less, that contact screens were useful only to offset lithographers, but were of no consequence or interest to photoengravers.

On several rare instances, a photoengraver here and there has admitted that he tried contact screens; and one or two went so far as to say that they were very good.

Nearly two years ago Eastman Kodak Co. introduced the Auto Screen Film, which has the dot formation of the halftone screen incorporated in the film itself; and this, too, is reported as being good for offset lithography. Nothing has been said about the Auto Screen Film for photoengraving.

It has been charged many times that photoengravers were slow to take on anything new. One of the reasons generally assigned to the phenomenal growth of offset lithography is, that those connected with that industry are eager to learn, are forward-looking, and will at least try anything once. This impeachment of photoengravers of course will be stoutly denied, but there is sufficient evidence to indicate that it is not entirely assumptive.

Contact Screens and Auto Screen Film may be of no value to photoengravers at all, but it would be definitely foolish or worse to come to that conclusion without a thorough trial. Even if only a relatively small number of photoengraving plants tried these innovations, and tried them fairly with a desire to truly assess their usefulness, we could then condemn or accept these items with the knowledge that our decision is based upon facts rather than fancy.—*The Photoengravers Bulletin*, May 1956.

The new Goss stereo equipment—the Pneumatic Pump, the Plate Perfector, and the Tension Miller—have been designed on the unit principle. They can be operated integrally, or separately, Krueger said. All controls on the Goss Pneumatic Pump are protected from heat. Speed of pour can be controlled for continuously uniform cast. Metal is poured automatically after core is locked in casting unit, and a buzzer sounds when cast has solidified. A selector switch on the Plate Perfector central control panel allows option of automatic or push button operation of the Pneumatic Pump. Special switches prevent premature or double pours. In event of emergency, depressing the emergency stop button will immediately stop the pour, along with all other functioning of the Plate Perfector and Tension Miller.

The casting box of the Plate Perfector has its own automatically controlled thermostats for its individual water circuit, with dial controls. The fixed ring is an integral part of the core. The fixed ring can be changed in a few minutes for casting double spread pages. Selector switches allow the operator his choice of thermostatically controlled water or manual control of water circuits; and automatic or push button metal pump operation. The Run-Jog selector switch allows the operator to jog the drive for easy checking and replacement of tools. The 4½ in. thick arch has power springs which lift and hold the plate in position during the shaving cycle—locking the plate in the arch, tail cutting, shaving and beveling—takes only 7 sec. A 3 h.p. motor with built-in brake drives the main gear train direct through a coupling. Centralized lubrication contributes to easy maintenance. Chips may be removed from either side of the equipment, allowing the Plate Perfector to be placed close to a wall.

The entire milling cycle takes 17 sec. in the Tension Miller. The cutter drive is powered by a 3 h.p. motor. The drive is mounted in ball bearings and runs in an oil bath. There are two cam-operated cutters. Air jets blow chips away from cutters and into a chip removal chamber. More than 300 plates can be milled before it is necessary to clean out chips from that chamber.

An attachment for the Tension Miller allows for color registration from

(*Continued on Page* 71)

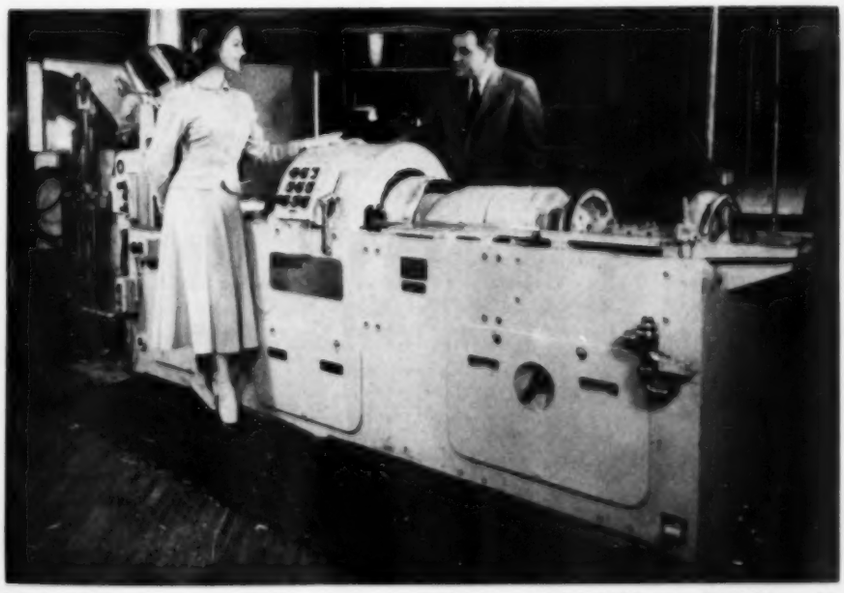

Fig. 2—Miss Rosemary Merhaut, Illinois Air National Guard Queen, and Henry P. Slane, president of the Peoria (Ill.) *Journal Star*, are shown viewing the new Goss Plate Perfector, built by the Goss Printing Press Co. A film, showing the use of the Plate Perfector at the *Journal Star*, was shown at the June ANPA-SNPA (Western Div.) Mechanical Conference.

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ANPA Research Progress —Color on Shoestring —Newsprint Conservation

At the Monday afternoon, June 4, session of the ANPA-SNPA Joint Mechanical Conference in Dallas, Tex., subjects for discussion were devoted to research and r.o.p. color. Henry Garland, Mechanical Supt. of the Pittsburgh (Pa.) *Post-Gazette* and a member of the ANPA Mechanical Committee, presided.

Don't Be a Buggy Whip Maker

Roy W. Prince, technical research director, ANPA Research Institute, Easton, Pa., presented a color film showing interior views and activities at the Easton Laboratories. Among other comments made by Prince was that there are now 82 installations of the ANPA-Dow Rapid Etch process for engraving magnesium. Of this number, 26 newspapers are using 45 machines. Prince commented that the newspaper industry is slow to pick up new methods. After two years passing of time since introduction of the Rapid-Etch process, only 3% of the ANPA Members are utilizing the process itself. He stated that those publishers who insist upon keeping old ideas in operation in connection with modern production cannot keep up with the parade. He cautioned his audience to keep their publishers out of the class of the buggy whip manufacturer. He also commented that the newspaper printing industry is reaching a point from an economic standpoint where it cannot stand still with respect to technology. The publisher must advance or go out of business.

Prince stated researchers are not easily discouraged because they realize for instance, that phototypesetting which is now beginning to take hold, was thought of in patent files nearly a century ago.

Zinc photoengraving alloys are now being made available for use in fast etching machines, which eliminates the need for working only with magnesium.

The speaker reported that continuing studies are being conducted in curved plate etching in the laboratory at Easton. He reported that two other manufacturers likewise are interested in curved plate etching for direct printing.

The laboratory also has increased its research activity in developing a curved plate mechanical lockup mechanism for direct printing from the plate. The device consists of a split or hinged saddle to hold the plates tightly without the use of adhesives of any kind such as are customarily used at the present time. The edges of the plate, clipped over a saddle, are held tightly under proper curvature.

The laboratory is interested in the development of a plastic plate router bit with the cooperation of the Cleveland Twist Drill Co., so as to secure a long life bit. Prince also reported that the ANPA Core Stripper and Sheeter is being modified by Alico, Incorporated, to produce a machine at lower cost.

Garland Reports on R.o.p. Color

Henry Garland, production manager, Pittsburgh (Pa.) *Post-Gazette*, reviewed the work of the ANPA-AAAA Committee on newspaper color work over the past nine years. He discussed in particular the second and third reports with respect to ink standardization in the first named bulletin and preparation of copy, art and photography for run of paper color advertising in the third report. In the third report the listing of types of art suited to r.o.p. color reproduction are set down, the two cardinal rules for which apply to all: (1) The art must have good color contrast, and (2) Art mediums must not be mixed.

Garland stated the joint committee expects to issue a fourth and last report on r.o.p. color advertising which will cover preparation of engravings and duplicating materials later on this year. He also stated it is the Committee's desire to make these reports available to all who can use them. Copies may be obtained by writing to American Newspaper Publishers Association, 370 Lexington Ave., New York 17, N. Y.

Shoestring Color

Perhaps one of the most outstanding sessions of the entire Dallas Mechanical Conference was the symposium at which three speakers discussed *Color On A Shoestring*. The three speakers were John Vlk, La Crosse (Wis.) *Tribune;* Ted Durein, Monterey (Calif.) *Peninsula-Herald* and William Spilman, Waynesboro (Va.) *News-Virginian*.

John Vlk exhibited an extremely interesting movie showing how r.o.p. color is handled at the *Tribune*. The speaker commented that, in the case of the *Tribune*, a lot of equipment is

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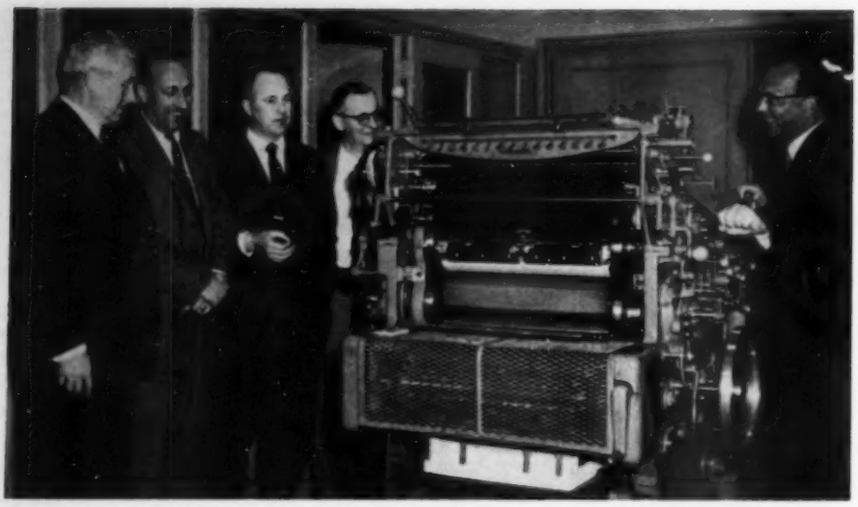
Attending the ANPA Mechanical Conference in Dallas

Fig. 1—(All pictures are identified left to right) Arthur H. Schmeichel, mechanical superintendent, Iowa City (Ia.) *Iowan;* James J. White, Filmotype Corporation; Leo J. Carle, mechanical superintendent, Elyria (O.) *Chronical-Telegram;* C. Frank Mann, composing room superintendent and M. George Martin, production manager, Louisville (Ky.) *Courier-Journal* and *Times*. Fig. 2—F. Stewart Myers and W. G. Dodge, International Paper Co.; Ernie Scherer, photoengraving superintendent, Detroit *News;* Tim Ryan, Intl. Printing Ink Co.; R. E. Gough, business manager, New Orleans (La.) *Times Picayune* and *States*. Fig. 3—E. Rene Leach, Mergenthaler Linotype Co.; George N. Voorhees, Honolulu (H. I.) *Advertiser;* I. Tornberg, vice president, Wood Newspaper Machinery Corp. Fig. 4—Walter Johnson, jr., manager, Southern Newspaper Publishers' Assoc.; George Kunz, production manager, South Bend (Ind.) *Tribune*. Fig. 5—W. E. Tolk, Cline Electric Mfg. Co.; Charles Lacure, mechanical superintendent, McClatchy Newspapers, Sacramento, Calif.; Find Sandgren and Sales Mgr. G. R. Dayton, Cline Electric Mfg. Co.; Hal P. Skemp, production manager, McClatchy Newspapers, Sacramento, Calif.; Charles T. Seaquist, production manager, Passaic (N. J.) *Herald-News*. Fig. 6—Ed G. Koriath and H. F. Thiele, jr., Korthe Engineering Co.; James Anderson, project engineer, Louisville (Ky.) *Courier-Journal* and *Times*. Fig. 7—Walter Fitts, production manager, State Printing Department, Topeka, Kan.; Ferd Voiland, Kansas State Printer and second Intl. Vice President of the Intl. Assoc. of Printing House Craftsmen, Inc. Fig. 8—Rock Wales, mechanical superintendent, Lansing (Mich.) *State Journal;* Homer Hendrix, pressroom foreman, Dallas (Tex.) *Morning News;* V. J. Ryan, Federated Metals Corp. Fig. 9—Edward J. Maggi, chief composing machinist, Phillips-Van Orden, San Francisco; Robert J. Heuslein, Automatic Saw Co.; Henry Wingard, press-stereo superintendent, Monterey (Calif.) *Peninsula Herald*. Fig. 10—W. G. Dorriss, mechanical superintendent, and C. P. Lawrence, composing room superintendent, Des Moines (Ia.) *Register* and *Tribune;* Chesley F. Carlson, Chesley F. Carlson Co., Minneapolis, Minn. Fig. 11—Alexander Kramer, pressroom superintendent, Syracuse (N. Y.) *Post Standard;* Harry E. Burris, mailroom superintendent, Harrisburg (Pa.) *Patriot News;* Harry G. Sherman, composing room superintendent, Syracuse (N. Y.) *Post Standard;* John J. McGann, production manager, Harrisburg (Pa.) *Patriot News*. Fig. 12—John O. King, sales manager, Ludlow Typograph Co.; A. T. Dodd, composing machinist, Little Rock (Ark.) *Arkansas Gazette;* Mack C. Forrest, Ludlow Typograph Co.; Cliff Penry, Printing and Publishing Div., Dept. of Commerce, Washington, D. C.; Ed Hand, Ludlow Typograph Co., Kansas City District. Fig. 13—Mrs. Clay Wellman, Evanston, Ill.; Mrs. W. R. Coddington, Aurora, Ill.; Mrs. Leven Deputy, Dallas, Tex.; Mrs. Earl R. Weiskittel, Youngstown, O. Fig. 14—Harry Knoll and Frank Stephan, H. B. Rouse & Co.; George E. Stenvenson, Vandercook & Sons, Inc.; Arthur B. Segal and Maurice Giger, North American Products Corp. Fig. 15—Fred W. Blodgett, pressroom foreman; William J. Kelley, composing room superintendent; William Hudson, stereotype foreman; and Frank Dempsey, advertising production manager, all of the Philadelphia *Bulletin*. Fig. 16—Tom Baker, Baker Colorplate, Houston, Tex.; Swain Rodgers, Art Craft Engraving, Lubbock, Tex.; L. L. Bobo, Caller Times Publishing Co., Corpus Christi, Tex.; Winston Reeves, Reeves Engraving, Lubbock, Tex. Fig. 17—C. G. Sparkman, composing room superintendent, Detroit *News;* H. L. Higgins, Canton (O.) Brush Moore Newspapers; C. L. Wright, composing room foreman, Dallas (Tex.) *Morning News*.



Proud of Their Company's Newest Product—Recently, the Harris-Seybold Company invited trade press editors to a showing and demonstration of the Harris Model 120 (14 in. by 20 in.) offset printing press in New York, N. Y. In the accompanying picture, from left to right, Harris representatives are shown: Ralph Randall, New York District manager; Ted Broadston, Eastern sales manager; Harry Beder, jr., director marketing; Ray Mulcahy, assistant lithographic production manager; Bob Niederhauser, manager sales engineering.

Reiser Reports on Latest Harris Printing Press

By ADAM HENRI REISER

The Harris-Seybold Co. recently provided the magic carpet that took me back to June 1906 with my first look at lithography. I saw again the roomful of hand transferrers working on stones of varying sizes from the small vignette stone to the large press stones for the two 48 in. flatbeds.

There, in the drug label house on the East side of New York, I had my first contact with the Hoe and the Scott and Campbell flatbeds of litho fame. There, too, I heard rumors of zinc plates that were being worked elsewhere.

Even at that time, we had men with different viewpoints. We had the men who saw the doom of the trade in the presses that would throw us out of business. We also had men who saw the bright gleam of a greater tomorrow in these new developments.

The rotary principle of printing was already applied to lithography. Metal as a base for images was wrapped around cylinders and used for direct printing on the old Hall rotary presses.

But this was something totally different. These new presses were producing work as good as when the old hand engraver, artist, or the hand transferrer got through with it. The new (in those days) offset presses were called the field of tomorrow and the youngsters were urged to get out and work with the newer presses.

And then in 1910 I saw the first offset press in a shop where rotaries and the offset shared places with one remaining lithographic flatbed press. Yes, the stone flatbed had been pushed out of the picture by the rotary—but lithography also had advanced.

The new 14 in. by 20 in. press, called the Model 120 shown recently to a group of editors by Harris, turned back the pages for me. The first offset I saw in 1910 was a 17 in. by 22 in. press with a Dexter feeder. It has often been said that, given a Kelly type of feeder, the offset press would progress more rapidly, with a simple feed mechanism that would provide better register feed control at increased production.

How Harris Wheel Operates

Incorporated in this Harris "baby" is a Harris Wheel front edge separator. Unlike the Kelly wheel, the patent-applied-for Harris Wheel does not rotate at a constant speed. Instead, it slows down at the moment it picks up each sheet, then accelerates to press speed as it feeds the sheet into the pull-out wheels. Operating in conjunction with the wheel are two stabilizing pickup suckers mounted next to the wheel on each side, which maintain the sheet at right angles to its direction of travel.

But that's not the only aspect of this new feeder. As the sheet moves down the feed table, controlled by the feed table tapes, it is again slowed down before reaching the register plate. This allows the sheet to settle solidly against the front guides, giving more time for good register and minimizing the tendency of the sheet to nick itself against the front guides. The same mechanism which slows and accelerates the Harris Wheel also governs the feed tapes, giving a synchronized feeding and registering system. These features, together with center-front-edge separation, are designed to permit maximum speed in changeover of a job-type offset printing press.

Quick feeder changes are possible with five thumb screw settings to adjust the pile and feeder from maximum to minimum size sheet. Production speed of the press is listed at 7000 i.p.h., but it is said to be able to do better.

Sturdily built, from its rigid mono-piece base through its printing as well as feeding mechanism, a number of features are included in the press that make it quickly accessible to the pressman for installation and checkup operations.

A roll-back water fountain is provided with the infinitely variable water control found on larger presses. The roll-back also provides enough clearance for quick installation of clean dampeners when necessary, as well as making the front guides easily visible for fast adjustment.

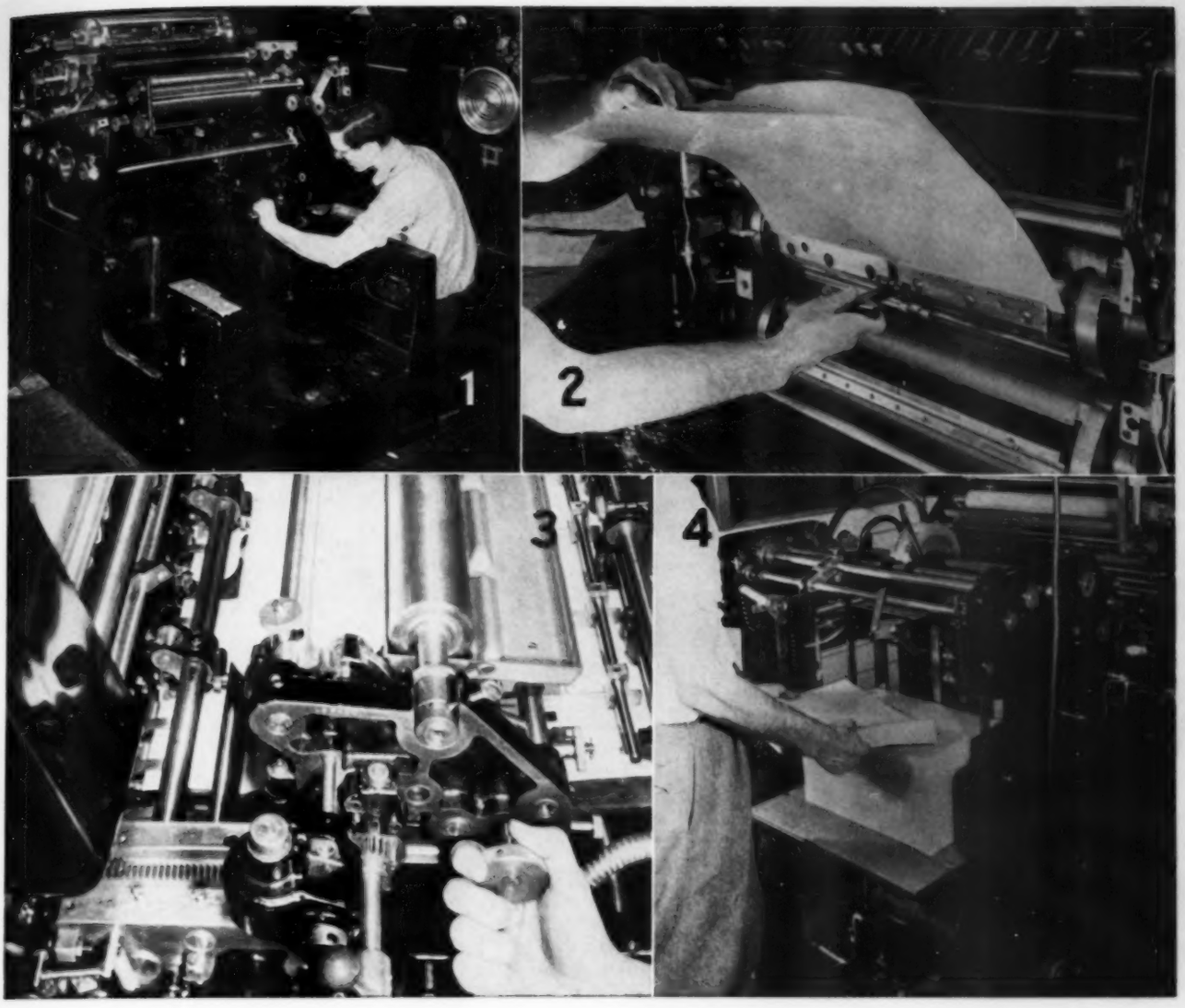
Three form rollers provide ample ink coverage, 80% of the ink leaving the fountain going to the first and second form rollers with the other 20% to the third form roller. Evidence of its effectiveness is found in the samples provided from a number of shops where the press had its practical workouts.

Fast acting plate clamps on the lead edge are locked securely in place by one pin-wrench motion, with the back edge of the plate being tensioned automatically by spring-loaded clamps.

Departure from the customary Harris-Seybold black painting of presses is found in the gray frame coating used on the Model 120.

Harris feels the printing industry is ready for this 14 in. by 20 in. offset press. In reaching this decision, Harris-Seybold observed that lithographic printing has grown to over a billion dollar industry, coming from 5% of national graphic arts output between 1906-1920 to currently well over 30%.

Prior to 1920, offset was busy getting started with the first single color 22 in. by 34 in. presses. Today five color presses are in use in sizes up to 53 in. by 77 in. In view of this expansion of the lithography and its invasion into the letterpress field, it was felt the 3000 to 3500 purely lithographic shops throughout the country would find their specialty supplemented by combination letterpress shops. In these shops, the short makeready time of offset coupled with presensitized plates, would provide 14 in. by 20 in. press appeal. For instance, where a specialized type of work involving perfo-



Features of Harris Model 120 (14 in. by 20 in.) Offset Press

1.—Factory Photo of a new Harris 14 in. by 20 in. offset press being erected shows how side frames are bolted to rigid mono-piece base for printing stability, longer press life.

2.—Fast Acting plate clamps on a new Harris 14 in. by 20 in. press allow quick plate changes. Above, a pin-wrench motion locks both segments of the lead-edge clamp. Plate is tensioned automatically by spring-loaded clamps.

3.—Rollback Fountain permits free access to dampener form rollers in new 14 in. by 20 in. offset press. Also reduces time for installing clean dampeners; sheet timing to front guides may be easily observed.

4.—Quick Changeover sheet feeder provides stock-size changes with five thumb-screw settings on Harris Model 120 offset press. Harris wheel front-edge separator with synchronized varying-speed wheel and tapes to provide positive feeding and sheet slow-down shown in this picture.

rating and numbering was required with perhaps even short-run imprint changes it was felt that the Harris would be useful. Through fast performance, the basic form could be run first and then perforating, numbering and imprinting afterwards in a separate operation.

Although every effort has been made to simplify operation of the new press, it cannot be turned over to unskilled help. The press definitely is not office equipment, but a production machine for commercial use.

However, in this most recent of introductions I had hoped to have answers provided for some of the pressman's complaints on small presses. For instance, pressmen complain of water adjustments both in running with seasoned or new dampeners. Tight adjustments to get moisture in the center squeegees out the moisture at the ends, causing dryups. Light adjustments bring less water in the middle with dryups.

Ink fountain cleaning with its fountain blade removal and setting, and ink roller cleaning with periodic removal of all composition and rubber rollers to remove the glaze is another time-consuming factor. Even though proprietary washups have aided somewhat in this direction, the above still has to be resorted to at times for cleanliness.

A great deal of beneficial work has been carried on in the ink and paper fields. Gloss inks and stocks and rapid color matching with quick-set inks all have aided offset. Immense strides have taken place in development of metallic inks and varnishing. Ability to backup, running two sides in succession, even on coated stocks, is very good.

The Harris Model 120 (14 in. by 20 in.) press certainly is a big advancement.

Seybold Saber 54" power paper cutter with Auto-Spacer at Crewdson Printing Company, Chicago · Photos by William Richards.

AUTOMATIC POSITIONING of pile is more rapid and precise than ever before with improved Auto-Spacer. Micromatic, six-sided spacer bar is self-indexing. Like many optional features, an Auto-Spacer can be added to your Saber later, if cutting requirements in your shop change.

Who says a paper cutter is not a "production" machine?

Even though they can't get along without one, some people in the graphic arts say that a paper cutter doesn't "produce" or "manufacture" anything—like a printing press does, for instance.

Well, may be.

But we're hearing a different story from a fast-growing number of printers and binders. They're the ones who operate the new Seybold Saber cutters.

By doing a bigger volume of work than was possible before, and by doing it more accurately, the Saber dramatizes the main way that a paper cutter can "produce": by cutting the costs of cutting.

The Seybold Saber introduces a new concept in paper cutting. Its "cushion-contact" hydraulic clamp, its improved cutting stroke, and its many other advanced features are delivering greater uniformity of cuts, and more cuts per hour.

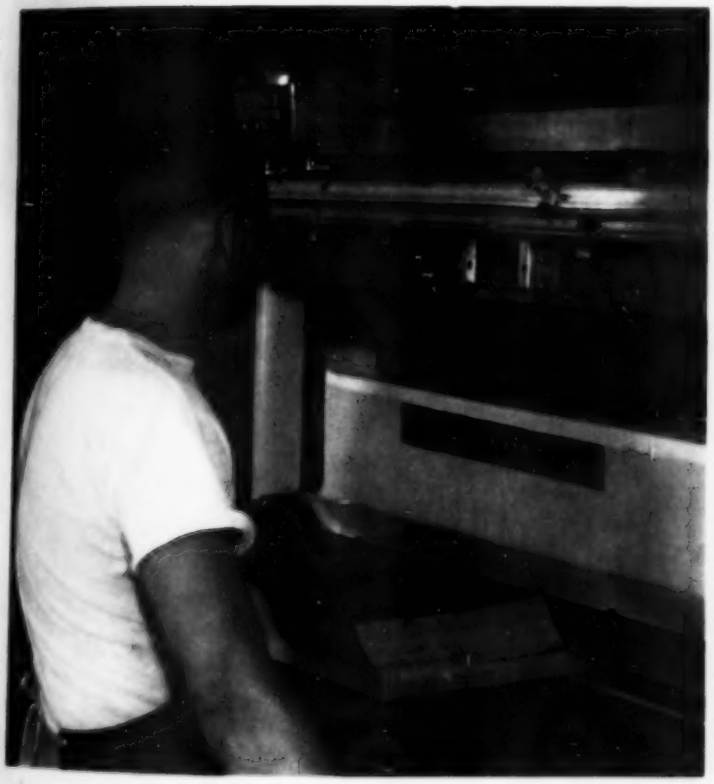
All it can "produce" for you—is more net profits.

We build the Saber in three sizes: 41″, 47″ and 54″. Its big brothers, the all-hydraulic Seybolds, are built in 65″, 85″ and 100″ sizes. Your Harris-Seybold representative will gladly give you the complete details. Or write Harris-Seybold Company, 4510 East 71st Street, Cleveland 5, Ohio.

HARRIS SEYBOLD COMPANY

SEYBOLD CUTTERS

Harris Presses • Seybold Cutters • Harris Litho-Chemicals
Special Products • Cottrell Presses • Platemaking Equipment
Macey Collators



"CUSTOMER'S CUT" is cleaner, smoother, steadier, comes from improved cutting stroke. Power is applied to the knife bar *ahead* of the knife edge. Cutting speed is uniform.

TOUGH, RUGGED Seybold construction gives plenty of muscle for heavy work. Saber has same heavy-duty design that has given Seybolds an average life of 33.6 years.

Newsprint Conservation and Color Register Control

William E. Gibbons, production manager, Portland (Ore.) *Oregon Journal*, was the chairman of the mailroom session of the combined ANPA-SNPA (Western Div.) Mechanical Conference held at the Statler-Hilton Hotel, Dallas, Tex., June 4-6.

First speaker of the session was F. L. Olds, T. W. & C. B. Sheridan Co., who presented a film on the Sheridan Three-Station Stuffing Machine. Olds said in introducing the film: "The first basic Sheridan newspaper stuffing machine was the large 8-hopper type for the larger newspapers. We later added the 5-hopper type for the medium and large newspapers. At this time, we are introducing the newest model stuffing machine to the industry—the 3-hopper Model 12P. This new model should receive good acceptance in smaller newspapers, but be equally effective for pre-stuffing sections for the larger newspapers.

"The first Model 12P Stuffer is opearting in the mailroom of the South Bend (Ind.) *Tribune*. Performance has been gratifying. The South Bend *Tribune* uses this small stuffer for prestuffing only, but the machine has sufficient capacity to do considerably more than required."

Cheshire Mailing Machine

Harold E. Burris, mailroom superintendent, Harrisburg (Pa.) *Patriot and News*, then reported on *Further Developments on Cheshire Mailing Machine*. Commenting on the *Patriot and News'* present installation, Burris said, "We found the Cheshire Mailing Machine fully justified itself in all phases of handling late papers without forcing us to increase either the number or the burden on our work force. The Cheshire has completely eliminated old style hand stamping. We can run from 12 to 108 pages without any noticeable increase in time for stamping. The time required for adjusting the machine to various size papers is a matter of only a few minutes."

Commenting on the progress made in the Cheshire equipment since the first installation 6 years ago at the Syracuse (N. Y.) *Post-Standard*, Burris said the top production for the first machine was 8000 papers an hour compared with 17,000 papers an hour which can be stamped today. Changes include replacement of the old type chopper labeling head with a rotary head rolling on the labels. Instead of chain guides, high speed grippers lead the papers today. The old "T" shaped belt conveyor has been replaced with a straight line unit.

How has this new equipment affected the operation at the Harrisburg *Patriot and News?* "Our press time is 1:10 a.m.," said Burris, "but frequently late news, last minute advertising corrections in the composing room, a damaged stereotype plate or a roll break from the very start on a press has delayed press time by as much as half an hour. Our Cheshire Mailing Machine, running at full speed, has been equal to the occasion and we got our papers on the first mail train.

"Prior to purchasing our Cheshire, our press time was 11:45 p.m. Its effect on mailroom operation was to move press time up to 12:30 a.m. and subsequently to the present 1:10 a.m. The extra time advantage has resulted in the paper carrying later news, better make-up and a far more readable paper as a whole. All these things are reflected in a very sizable increase in circulation and in making everybody as happy as they ever are in a newspaper operation."

Philadelphia Bulletin Mailroom

The next presentation in the mailroom session was another film. This one was titled *Mailroom Operation at the Philadelphia (Pa.) Bulletin* and was introduced by Richard Powers of that paper.

Gibbons' Remarks

William E. Gibbons, Portland (Ore.) *Oregon Journal*, said there was one way in which considerable newsprint could be conserved in the mailroom. The common practice of sending a full copy of the newspaper to each of the persons in the organization which require to see all revisions mounts to a great number of issues over a year's time. Often these revised newspapers are not looked at by the person concerned, or, at most, are only given a cursory review. As a conservation measure, it would be better to send to those persons requiring only certain sections of the paper just the portions of the paper needed. Thus a single copy of the paper could be used for two or more of these checking copies.

Questions and Answers

Jerry Bolman, mechanical superintendent, San Jose (Calif.) *Mercury-News*, wanted to know the floor space requirements for an 8-pocket Sheridan Stuffing Machine. Olds said that 24 ft. by 24 ft. was not too large to allow, figuring space in which to move skids around the machine, though the machine itself would certainly fit into a much smaller space.

To the Pressroom

In the pressroom session which followed immediately after the mailroom session, Earl R. Weiskittel, pressroom superintendent, Youngstown (O.) *Vindicator*, and John W. Park, research director, Chicago (Ill.) *Tribune*, were co-chairmen.

Weiskittel led off the session with a presentation on *Newsprint Conservation in the Pressroom*. "The ANPA Mechanical Department has done an outstanding job of publicizing ways and means of preventing waste," he began, "but a study of the waste bulletins leads one to believe there is still a lot of educational work to be done.

"Management must take a greater interest in saving newsprint and there is no better way to do this than to listen to the pressmen's advice about the makeup of various sections of the paper.

"Much damage is done to paper rolls by poor methods of handling. Many larger papers haul rolls of paper double-decked on the truck. When unloading at the plant, great damage is caused by wrapper roll-up. We have eliminated this type of damage to a great extent by using old nonfelt blankets between the rolls. Another source of damage is caused by using a pry stick that digs into the roll. We use an ordinary pick handle for this purpose.

"Very few papers today should be without a rewinder if they are sincere in their efforts to reduce waste.

"The press should be adequately equipped with web break detectors. No pressman can react as fast as something automatic. If a press can be stopped sooner with a detector, then the expenditure of a few dollars for this equipment will pay for itself in paper saved. We are considering putting detectors on the first roller over which the sheet passes when it leaves the roll. A detector at this point should stop the press 10 to 20 papers quicker on a break from the roll.

"We used a little trick that will save many papers after each web break. When the sheet breaks, the pressman or one of the crew designated to do it, slackens the compensator at the unit where the break occured. On our press we slacken the compensator as much as 8 to 10 full turns depending on the broken length of the lead. When the web is threaded through the press and is

Pungent Comment About ½ Col. Cuts By Newspaper Composing Executive

(Abstracted from address on Newsprint Conservation Methods—11 pica columns, by Joseph Budai, Composing Room Foreman, Cincinnati (O.) *Enquirer*, before Dallas (Tex.) ANPA Mechanical Conference.)

"Like a lot of newspapers, we use a great deal of half measure news cuts. According to the production department dictionary, a ½ col. cut is a heinous concoction brewed by the editorial department to run up costs, slow down operators and production, make editions late, nominate engravers for the booby hatch, and give the gremlins a chance to put Marilyn Monroe's cut over Kruschev's name line.

"At the *Enquirer*, we have the same trouble. With the new measure and a 6 pica 15 line cut, the operator has his hands in the assembler more than on the keyboard while time is wasting. However, editorial sagely says: 'We like them—they give sparkle to the paper.' "

MECHANICAL DEPARTMENT TABULATES NEWSPAPER PHOTOTYPESETTING DATA

As a service to ANPA member newspapers, the ANPA Mechanical Department prepared and distributed a comprehensive printed report concerning the usage of phototypesetting equipment among 12 newspaper plants. The report was distributed at the Dallas (Tex.) Mechanical Conference. Copies were eagerly gobbled up by those in attendance.

Ten of the 12 newspapers employing phototypesetting stated they either are pleased with the results obtained for display composition or feel that phototypesetting is the more economical method.

The reporting newspapers use 17 Fotosetters, 3 Photon, 8 Typro, 3 Protype and 10 Filmotype equipments, or a total of 37 machines.

In photoengraving, one newspaper uses an Acme machine with conventional engraving, while others use Chemco and Master high speed etching machines.

over the drag roller, the compensator is returned to its original position. This simple trick helps the web to tighten up to its running tension in the press and saves many papers that would otherwise be lost due to short or cut off heads.

"Presetting of compensators and folders before webs are threaded through the press is a must if waste is to be kept to a minimum. Press diagrams and charts should be used to record the various runs and compensator settings. This system is more necessary today due to running color leads. Registration of color leads can be very expensive and wasteful if records are not kept for this purpose. Where unit type presses are used and units are switched from one folder to another, records are essential when collect runs are made so that the high and low plates can be placed in their proper positions."

Relief Offset Progress Report

A progress report on the Relief Offset printing process was made by Sherwood W. Mabus, ANPA Research Institute. Publishers who are now, or soon intend to incorporate high speed etching and photocomposition into their operations will find Relief Offset printing of special interest. This is a process which is in its earliest stages, Mabus began.

"Our present investigations are toward producing better quality on poor printing papers in daily production through the use of Relief Offset printing. . . Relief Offset printing as I refer to it from now on will consist of (1) a form composed to the point from which a full page Dow etched plate can be made for stereotyping, (2) the stereotypes for use on existing press equipment against (3) an offset blanket cylinder, from which the image is transferred to the paper against an impression cylinder.

"I specify photocomposing to obtain the image reversal required for a right ready plate. Dow etched plates are specified because of their known quality and lack of image loss in the etching process. Stereotyping is necessary to the Relief Offset printing process because in daily production, multiple plates are frequently required.

"We have been assured by various sources that stereotyped plates could be held to within plus or minus 0.002 in. thickness. If this is true, these plates may prove acceptable to the present process.

"If plates of acceptable tolerances can be secured, a gain in quality by printing to the offset blanket becomes possible because image transfer will be more complete than is possible by direct transfer to the paper.

"It should be understood," Mabus concluded, "that the offset blanket which is in direct contact with the inked stereotype is quite different from conventional press cylinder blankets."

Hutchinson Outlines Growth

Glen R. Hutchinson, production manager, Los Angeles (Calif.) *Times* and *Mirror-News*, gave a detailed description of the growth of the Los Angeles, Calif., area, which necessitated a comparable growth in his newspaper's mechanical efficiency.

Color Register Controls

E. Curtis White, pressroom superintendent, Indianapolis (Ind.) *Star* and *News*, was first on a panel of speakers describing experiences with Hurletron Electric Eye Color Register Controls.

After getting good plates and good press work generally, the *Star* and *News* mechanical men still found too many papers were out of register on the color. Even though they tried every press technique they ever heard of, they could not entirely solve this register problem. They finally installed one complete unit on a Goss press and a second one on a Wood

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Advertisers Tell Problems At Mechanical Conference

On Tuesday afternoon, June 5, the Advertising and Engraving Session of the combined ANPA-SNPA (Western Div.) Conference was held at Hotel Statler Hilton, Dallas, Tex. Chairmen of the session were Leven Deputy, mechanical superintendent, Dallas (Tex.) *Morning News* and W. W. Southam, Southam Newspapers, Ltd., Toronto, Ont., Canada.

The first three speakers on the program invited to talk before the Conference were from Dallas department and food stores. The three speakers participating in the opening part of the session were Mrs. E. Sue Sizer, Neiman Marcus Co.; Omar Hiett, Titche Goettinger Co., and Henri Piller, Wyatt Food Stores.

Dairypak, Incorporated, Cleveland carton manufacturers, recently announced installation of a Miehle 61 Five Color Rotary Letterpress. The 61, manufactured by Miehle Printing Press & Mfg. Co., is equipped with a double delivery to permit continuous operation. Near the delivery end of the Miehle press are pictured Carl Rease, production manager of all divisions of Dairypak, checking a press sheet with Harold Simson, foreman.

Each of the three speakers endeavored to explain to the newspaper mechanical executives how they were trying to achieve faithful reproduction in illustrations, particularly in color work, in the newspaper. Considerable thought and expense is put into the preparation of art so that the advertising will attract the reader's interest.

During her discussion, Mrs. Sizer demonstrated what the store is trying to achieve in advertising by having two pretty models parade before the audience.

Omar Hiett discussed *Problems in Retail Department Store Advertising*. He went into considerable detail with respect to the necessity for ad tear-ups because of the fact that the day before publication of an advertisement, the buyer comes screaming that the merchandise to be advertised has been shipped late or has been lost en route. In cases like this, he stated, "this is no problem to us. We simply take scissors, cut the ad apart, eliminate that particular item, rearrange and paste up the balance, mark it C and R, and send it to the paper." He acknowledged that the hardship in changing the advertisement because of this unforeseen circumstance lies in the composing room.

He took occasion to ask a number of pointed questions, some of which were as follows: Why in making corrections on a proof, some corrections are made and some are not? Why one can consistently make a correction and it will go neglected until the last proof? Why at times it is so difficult to get copy set as marked and as shown on the layout? Why is

something right on all progressive proofs only to be wrong when it appears in the publication?

He concluded: "I can only say I wish, in spite of what I may personally think, that we could have our own organization handle our volume of work as efficiently as our excellent newspapers do theirs."

Henri Piller's address was along similar lines to that uttered by the previous speaker. He explained however, there is nothing artistic about grocery ads. Food store advertising is purely a price list containing perhaps 150 items per page. Of necessity, he said, we must make last minute changes because of changes in the market or because of revised prices on food items. Because of the economics of the newspaper publication field, food store ads must be submitted to the newspaper ahead of time. Just previous to publication, it may be necessary to arbitrarily change a number of items in a page advertisement.

Eldon Rohrson, president, Chicago Agency Production Men's Club, expressed the wish that there would be increasingly splendid teamwork between the mechanical men and the advertising agency. He hoped to resolve by discussion the variation in use of standard inks and differences in manufacture of the inks. There is a tremendous variation in column width and page sizes. He said: "This is the biggest headache."

In the discussion period following Rohrson's address, Richard E. Lewis, ANPA mechanical department manager, said that all major ink makers can furnish ANPA standard color inks. He stressed that the advertising agency's approach to the standardization problem would be for the agencies to attend the ANPA Publishers' Convention. The Publishers are the only ones who can remedy lack of standardization.

Edgar S. Leigh, Ottawa *Citizen* (Ontario, Canada) discussed *Electronic Engraving of Aluminum Plates.* He stated the major difficulty in operation of the electronic engraving machine is in obtaining a consistent halftone dot. The molding depth is not the best engraving depth. He thinks further experimentation is needed. He said work is going forward on a carbide tipped stylus with which the actual engraving work is done.

William R. Reed, publisher, Taunton (Mass.) *Gazette* discussed *Scan-A-Sizer—Versatility For Newspapers.*

Dr. S. W. Levine, Fairchild Graphic Equipment Co., spoke on the Variable Response Unit as a solution to halftone control in the electronic engraving. He stated 10 machines are now being field tested and the unit may be made a part of the standard electronic machine. (See article by Dr. Levine and R. N. Hotchkiss entitled *Variable Response Unit*, p. 65, June 1956 issue of *Printing Equipment Engineer.*)

High Speed Zinc Etching

Charles A. Frederickson, mechanical superintendent, Westchester County Publishers, White Plains, N. Y., reported to the ANPA-SNPA (Western Div.) Mechanical Conference in Dallas that approx. 20,000 sq. in. of halftones, line and combination work had been done using a recently announced special zinc in a one week period. He stated: "Results, in our estimation, are equal to the results we obtained from magnesium."

"However," he continued, "the etching time required has increased, indicating zinc etching is slower. It took 3 min. to etch halftones, line work between 9 and 10 min., to get down to 0.012 in. We then powdered twice to get our full depth. A little change in the amount of ingredients making up the bath is necessary but we used the same bath for both halftones and line work. At this time, I cannot give comparison cost figures between magnesium and the special zinc, but the cost of zinc is less than magnesium."

High Speed TTS Machine Care Considered By 100 Machinists

Questions related to maintenance of high speed TTS operated linecasting machines dominated the discussions at a meeting of approx. 100 composing room machinists at the ANPA-SNPA (Western Div.) Mechanical Conference, Dallas, Tex., Tuesday night, June 5. Mostly, questions related to matrix assembly and slug casting controls were considered. R. W. Garrott, composing room machinist of the Tulsa *World* and *Tribune* presided.

One of the first questions to be asked was related to metal adhering to the metal pot mouthpiece vent slots instead of pulling away in the form of sprues when the metal pot retreats from the mold. If abnormal behavior of the vent sprues results in imperfect slugs and back squirts, Harvey F. Schieber, mechanical superintendent of the Southern California Associated Newspapers, Los Angeles, explained that he had overcome this problem by widening the vent slots in the mouthpiece without in any way deepening the slots so as to prevent easier pulling away from the slugs with sprues attached from the mouthpiece. In his operation Schieber said that four molds are used in the mold disk successively. He uses a preparation called Slick on the mouthpiece to assist as an anti-oxidant.

A question presented was with respect to back squirts on machines where molds are changed frequently from short to wide measure and vice versa. A suggestion was made that metal pot mouthpiece wipers should be used to prevent squirts where short and long mold measures are used interchangeably during the course of the day.

In answer to a question from the floor, William F. Mulroy, Mergenthaler Linotype Co., stated that on Linotypes where 36 pt. display molds are used, a better face and more solid slugs can be obtained by use of the auxiliary jets in the mouthpiece.

Some discussion was had respecting slugs sticking at ejection in the mold. Several machinists asserted that on some machines equipped with Linolized molds the trouble seemed to be aggravated and as soon as the molds were removed from the machine and other molds substituted the "banging" ceased. It was conceded by all concerned that the ejecting face of the ejector blade should be parallel with the mold to insure smooth ejection of the slug from the mold. One machinist reported that on a six mold disk (Intertype) he soaks the molds in Metl-off silicone solution once a week. As a result, a 24 pt. 30 pica mold operates perfectly with respect to ejection. It was also brought out that in some cases sticking of slugs in the mold is aggravated by adding more rib recesses to the mold cap.

During the discussion on the casting of normal face solid slugs, Chairman Garrott remarked that neither the mouthpiece burner in the case of gas heating equipment nor the mouthpiece element in the case of electrical heating equipment is not designed to heat the metal. Proper temperature of the metal should be maintained in the pot crucible. Heating of the throat passage between crucible and mouthpiece is maintained simply to facilitate proper flow of metal at the right temperature into the mold. As

(*Continued on Page* 71)

"I found a cookie cutter in the folding machine".

Phototypesetting

Application developments on Fotosetter—Progress report on Linofilm—Teletypesetting economies and other composing room topics discussed at Dallas (Tex.) Mechanical Conference.

The fascinating subject of Phototypesetting dominated the Composing Room Session at the joint ANPA-SNPA (Western Div.) Mechanical Conference, Dallas, Tex., Wednesday, June 6. Chairmen of the meeting were Harry Sloan, production manager, New York (N.Y.) *Mirror* and Allan M. Woods, production manager, Long Island (N.Y.) *Newsday*.

The first speaker on the program was Louis Rossetto, assistant vice president, for product development, Mergenthaler Linotype Co. He presented what might be called a progress report regarding the Mergenthaler Linofilm system. Please see separate article on other pages in this issue.

Developments in Application Of Photocomposition

One of the most enlightening and informative addresses of the Conference was the address delivered by Earl N. Godshall, manager, Fotosetter Div., Intertype Corporation. The subject of his address was *Developments in Application of Photocomposition.*

The speaker said the five Fotosetter products are: Right-reading film positives, Wrong-reading film positives, Right-reading film negatives, Wrong-reading film negatives or photographic paper positive. The type sizes range from 4 pt. through 36 pt., in line lengths up to and including 42 picas wide.

"Photographic composition," Godshall said, "has created new work for the trade typesetter and the typographic service houses in the form of type for silk screen printing, photographic slide presentations, display material in the form of signs, posters, banners, and so on." The speaker also commented that the most recent development in photocomposition using a Fotosetter machine is the setting of grocery style ads.

The speaker continued: "Photocomposition should not at this time be considered as a substituted method of typesetting but as an alternate method of typesetting." In the newspaper plant or in the newspaper job printing department, phototypesetting can be employed for offset press work or duplicating machines, for TV title work, for editorial graphs and charts, for inter-office forms, for house organs, and for rotogravure and magazine sections.

The speaker said that type on film or photographic paper has been tried and proved to be an economical and successful application in the making of any type of photomechanical printing plates. Photocomposition has measurably improved the quality of type reproduction in offset, letterpress and gravure printing.

Godshall asserted: "It is my opinion that there is very little, if anything, left to be gained productionwise in composing rooms using the same equipment and methods that have been in use for many years. We must look at new processes with an open mind if we are to best appraise any potential productive gain to be attained."

Mindful of the production tempo which exists in the daily newspaper plant, Godshall stated that the film and photographic paper generally used in the commercial plants today require some 20 to 30 min. for developing, fixing, washing and drying. "This is not fast enough for newspaper production," he said. He related that after experimentation in the plant of the Milwaukee (Wis.) *Journal,* Resisto Rapid photographic paper was found to be highly successful for fast reproduction and it is used directly in the Fotosetter machine. The processing time was cut to less than 5 min. That is, in other words, in less than 5 min. after the operator has completed his setting at the machine, the material is ready for makeup. He mentioned that Resisto Rapid photographic paper is dimensionally stable—it does not stretch or shrink in any appreciable degree.

"The most recent development in photocomposition," stated Godshall, "is the use of the Fotosetter machine for setting market or grocery ads, drug store and similar types of composition requiring various sizes of type in the same line and, in different type faces. . . .By manufacturing 18 pt. advertising figures and using the standard 8 and 12 pt. basic size Fotomats, mixing from two magazines, an operator can set in one operation and without any machine changes all the combinations needed for this type of advertising—the setting of one half to one to one and a half proportions in at least eight different size variations.

Ad Proofing Methods

In discussing the proofing of photocomposition, the speaker stated that conventional photographic methods of printing Veloxes can be done, but this is too time consuming and also too costly. If the end product is transparent film the Diazo method may be used. The cost of this operation is approx. 2c per sq. ft. and requires approx. 20 to 25 sec. per page proof.

"The system in general use today consists of making a secondary master by contact printing from the original made up ad onto Autopositive extra thin paper which is used in the Diazo type machine for multiple copies. The material cost of this operation is approx. 20c for one secondary master and is 50% faster than the photocopying system. We are hoping, however, for a system, which, if proved successful, will permit the making of five proofs in less than 5 min. at a cost of about 8c per proof. This system may also provide a quantity of proofs such as 100 or even 1000 copies." Godshall warned his audience that at the present time development of this system is strictly in an experimental stage.

Economics of Teletypesetter

According to analysis presented by B. G. Burke, production manager, San Diego (Calif.) *Union and Tribune,* there is a saving of 0.08c per line of straight matter composition in the use of Teletypesetter operated machines as against manually operated machines. Burke said that the operating cost of the Teletypesetter is higher than that for manual machines but efficient production of the TTS equipment results in a saving as mentioned above. In presenting some figures to explain the savings, the speaker said that they have been selected arbitrarily, for illustration only and do not necessarily reflect actual costs.

Burke presented a simple method of comparing costs which he said is based on the cost of operating one machine for one week. By dividing the average machine production into the cost of operation a fair line cost can be arrived at.

He said: "In the operating cost column you should include direct labor, maintenance labor, maintenance parts, matrix replacement and capital investment. If you wish to simplify, you may consider the capital charge on the linecasting machine as common to both operations. In that case, capital investment would be zero on the manual side, and would include only Teletypesetter equipment and attachments on the tape-operated side.

A table of comparative costs as presented by Burke is as follows:

	MANUAL	TTS
Direct Labor	$100.00	$140.00
Maintenance Labor	20.00	30.00
Capital Investment	....	7.50
Materials & Parts	18.00	20.00
Total	$138.00	$197.50

Burke continued by saying that the operating cost of the Teletypesetter machine is higher for several reasons. The direct labor cost includes perforator operators and monitors. The maintenance cost has been weighted, as have materials and parts. The capital investment includes the necessary extra equipment actually purchased. If, however, the change to Teletypsetter resulted in a reduction in the number of machines required, or made the purchase of additional machines unnecessary, the Teletypsetter operation should be credited with the capital charges thus avoided.

The speaker explained: "Using the cost figures previously established, an average of 8000 lines manually and 12,000 lines of TTS per week, would show a line cost of 1.72c manually and 1.64c on TTS. An indicated savings of 0.08c per line. On a production of 200,000 lines per week, this represents a net saving of $160. Using the same cost figures and an average production of 7500 lines manually against 12,500 lines TTS, we get a line cost of 1.84c for manual and 1.58c for TTS, a difference of 0.26c per line. On 200,000 lines this represents approx. $500 saving per week."

"Using the same formula, 12 TTS equipped machines could reasonably be expected to produce the same amount of type in 3 hrs. as 12 manually operated machine would produce in 4 hrs."

Maximum Value From Manpower

"Vacations and Teletypesetter operation have brought about a revolution in composing room management," was the observation of Carrol Morris, composing room foreman. Waco (Tex.) *News-Tribune and Times-Herald*. The morning and evening papers in his plant have a combined circulation of around 50,000.

Morris explained that it is necessary to have a flexible working force for vacations, holidays and coffee breaks, and to meet changing needs that arise from day to day. Five years ago, he related, when the Teletypesetter displaced several operators, they were placed on ad composition, ad machines and makeup. With the increase in vacation time and other employee benefits, this retraining program began to pay dividends. These employees are competent now to work in two or more job classifications. Morris also said that the day foreman, night foreman and ad foremen also complement replacements.

In addition to presenting his analysis of the complex composing room operation, Morris also stated: "The requisites for getting maximum value from available manpower should include modern equipment. Always provide adequate tools of the trade for competent workmen."

Why Not a Round Composing Room?

Neal E. Dyer, business manager, Camden (N.J.) *Courier-Post*, presented an illustrated slide lecture on the new composing room in the plant of the *Courier-Post*. He presented an analyses, illustrated by slides, of the efficient operating plan of the composing room in his paper. At the conclusion of Dyer's address, someone in the audience wanted to know why a square composing room is the most efficient. Dyer replied that the worker's steps are saved and production is conserved. For this reason it is the most efficient, unless, he added, you could design a round composing room.

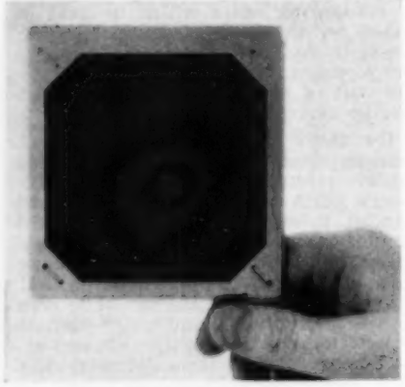
Efficient Composing Room Production

Joseph Curley, composing room foreman, Long Island (N.Y.) *Newsday*, presented an extremely interesting discussion which he illustrated with slides projected on a screen regarding efficient handling of type and material in process in the composing room, particularly with reference to the efficient management of ad composition and scheduling.

In discussing the control methods in effect in the composing room Curley said: "You must have the cooperation of all related departments to make these methods work." He also related that all of the controls in use in his plant are not perfect but have been instituted and revised to keep pace with increasing business.

Field Testing is Imminent For Linofilm Phototypesetter

Initial Linofilm systems for phototypesetting and photocomposing for field testing are nearing completion at the Mergenthaler Linotype Co., and will be released soon for trial operation under standard production conditions. Announcement to this effect was made by Linotype's assistant vice president for product development, Louis Rossetto, at the combined mechanical conferences of the American and Southern Newspaper Publishers Associations, Dallas, Tex., June 6.



A Linofilm font, used in the photographic unit, is made of glass and aluminum, weighs 8 oz. It is said to last indefinitely, barring actual breaking of the glass. Each font contains 88 characters, and 18 fonts are immediately available to the machine operator, allowing 3 sec. to change from one font to another.

The Linofilm system, explained Rossetto, provides a type range from 4 to 108 pts. in measures up to 96 picas, and a sustained speed which, although without any inherent limitation, is now 15 newspaper col. lines per min.

Four Separate Units

The Linofilm system is made up of four parts: Keyboard unit, Photographic unit, Corrector and Composer.

Keyboard Unit

Composition starts at the Keyboard unit in which are combined an electric typewriter, a digital computer, and a tape perforator. The original copy is "translated" with all specifications and justification into punched tape. The typewriter also produces a typed page ready for proofreading.

The Keyboard unit characteristics, Rossetto said, are: (1) Speed is maximum electrical typewriter input. (2) Justification is automatic and space distribution is between words. (3) Means are available to letter space as well as subtract from the basic white space around each letter. (4) Point size changes from 4¾ pts. to 18 pts. are available in 12 steps by pushbutton control. (5) Interline leading of 0 to 18 pts. above body size is available by keyboard control. (6) Point size change is

Louis Rossetto, assistant vice president for product development, Mergenthaler Linotype Co., announced the company's new Linofilm system when he spoke to the combined mechanical conferences of the American and Southern Newspaper Publishers Assoc. at Dallas, Tex., June 6. Here Rossetto shows a strip of Linofilm tape and the film made from it.

automatic. (7) Eighteen grids (fonts) are available, each with 88 characters. (8) Quadding and centering is automatic. (9) Faces can be mixed freely at the same size in the line. (10) Line length indicator gives exact position in the line for tabular work and runarounds. (11) An incorrect line can be "erased" by the operator.

Photographic Unit

The punched tape is placed in the Photographic Unit. When started, the unit automatically follows the "commands" of the tape and produces type on film or paper ready for makeup or platemaking.

The characteristics of the Photographic unit are: (1) Typographic quality is excellent with a range of 4¾ pts. to 18 pts. (2) At present, photographic speed is on the order of 15 newspaper lines per min. However, stated Rossetto, because of its unique optical system, Linofilm has no inherent speed limitations. (3) Line length is 30 picas. (4) It carries 18 grids (fonts), a total of 1584 characters. (5) Any or all grids can be changed quickly. (6) Pi grids for special work can be provided. (7) Line spacing as punched into tape may be changed. (8) Handles original and corrected spliced tape. (9) The only attention required is to insert tape, maintain the film supply, and remove the exposed film.

Correcting Means

In the Linofilm system, various provisions have been made for correction. Sequentially, they are as follows: A keyboard error can be killed at the keyboard and this automatically kills the line on the tape. Next, it is possible to correct the tape itself, since each line exists as a block of perforations on the tape. This can be done from proofreading of the typescript or from a first run on the photographic unit using paper. The tape is corrected by simple scissors and paste pot technique and can then be re-run.

Corrector Unit

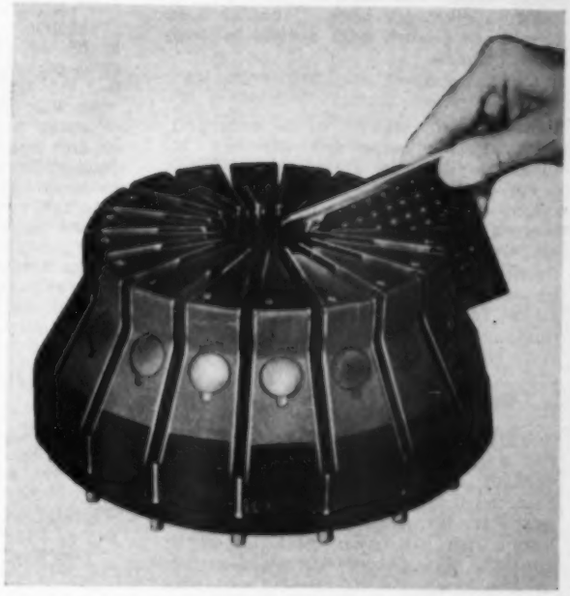
A means of correcting the film is also necessary. This is accomplished by the Linofilm Corrector which is a shear and welder unit. This unit will automatically shear a line of type out of a film galley and substitute for it a correction line from the correcting galley, welding this line in the place of the erroneous line. On line-for-line substitutions, the correcting speed is about 3 lines per min. Provision is made for several types of operating cycles so that, for instance, a line may be removed and a paragraph inserted or vice versa.

"While the foregoing has used 'film' as the medium of correction, the Linofilm Corrector will operate equally well with plastic-coated paper, having a thermoplastic base which will permit welding," explained Rossetto.

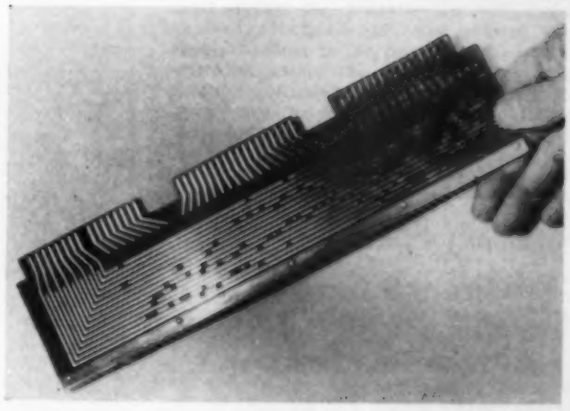
Composer Unit

The fourth unit is called the Linofilm Composer. When type from the

At the Linofilm Keyboard unit, original copy is "translated" in perforated tape, along with type specifications and justification information. The tape is inserted into the Linofilm Photographic unit which automatically produces the required type on films. Shown here is the original copy, the tape perforated to produce the type, and the film bearing the type.



The Linofilm Photographic unit holds up to 18 font plates in this turret. Each font plate bears 88 characters, making a total of 1584 characters for immediate use. Obeying the "commands" of the tape, the machine automatically changes fonts in 3 sec. Font plates can be removed or inserted in the turret in a few seconds.



This is a Linofilm width card (keyboard unit) made of metal printed on unbreakable plastic. It provides an electrical circuit connecting the keyboard with the justification computer. Each face is accompanied by a corresponding width card to provide the exact spacing needed.

A special illumination tube, similar to a stroboscopic light, emits a light-flash which projects the character image from the Linofilm font plate to the sensitized film. Pictured here is a "life test" undertaken by the Linotype Research Department to determine all pertinent characteristics of various tubes.

Transistor-like diodes instead of electronic tubes are used in Linofilm circuits to eliminate bulk. Pictured here is a diode, shown with a dime to illustrate its size.

photographic unit is to be enlarged, reduced, or composed directly in place on film over a layout, the Composer unit is used. This optical machine enables composition of type from 4 pts. to 108 pts. to a maximum of 96 picas line length, using as its input lines of type on film or paper generated by the Linofilm itself. Aside from the enlargement and reduction function, it also fulfills the requirement of line placement or layout.

The Linofilm Composer is essentially a small table-top device, its working surface being the size of a full-size newspaper page. By dial control, it will enlarge and focus a selected line and place it in a desired position by manipulation of two knobs for up-down and left-right control. The projected line is visible to the operator in its correct size and desired location, at which time he pushes a button to photograph it onto the film or paper and proceeds to the next line. Provision is made for an automatic rephotographing cycle so that a block of type may be photographed line by line as well.

Specialty Printing

(Continued from Page 28)

dorfer Continuous Form Collator shown in Fig. 3.

To demonstrate the amount of information communicated by the multiple part form, Sadauskas broke down a typical 12-part snapout; in so doing he further emphasized the tremendous amount of printing and binding which can be accomplished in one high-speed operation by this type of equipment. The 12-part form demonstrated was further divided into three distinct sets, each strip-pasted as a unit, the three sets being finally pasted together as a whole unit.

Section I consisted of six sheets of different color and weight stock printed in two colors, numbered, perforated, and pasted at the head. One typing carries common information, by means of interleaved carbon, to duplicate sheets with the following designations: *Invoice; accounting dept., alphabetical file; accounting department, numerical file; sales regional invoice; salesman's invoice; order department, open file—accounting.*

Section II was pasted at the bottom for easy removal as a unit, and consisted of: *Shipping order—plant copy; packing slip; and shipping order — production department — accounting.*

Section III consisted of three different colored sheets printed two colors one side, one color reverse, interleaved with carbon to duplicate the same common information from the original typing on sheets marked: *Acknowledgement; salesman's acknowledgement; and order department, numerical file copy.*

Equipment is available for the production of such forms with as many as 19 parts—delivered at the rate of as many as 15,000 sets (17 in.) per hr.

In Fig. 4 is shown a Meisel in-line press in a series capable of printing on five rolls of paper interleaved with four rolls of carbon. The webs pass from unwind stands over turning bars into their respective converting units. There each can be printed twice on the face, once on the back, numbered twice on the face, cross and length perforated, and collated and pasted to carbon paper webs unwound from rolls within each unit.

Roser Discusses Printing Plastic Films

"Be careful!" was the admonition given by J. L. Roser, manager, Graphic Arts Div. Milprint, Inc., at the beginning of his discussion of *Flexographic and Rotogravure Printing of Plastic Films.*

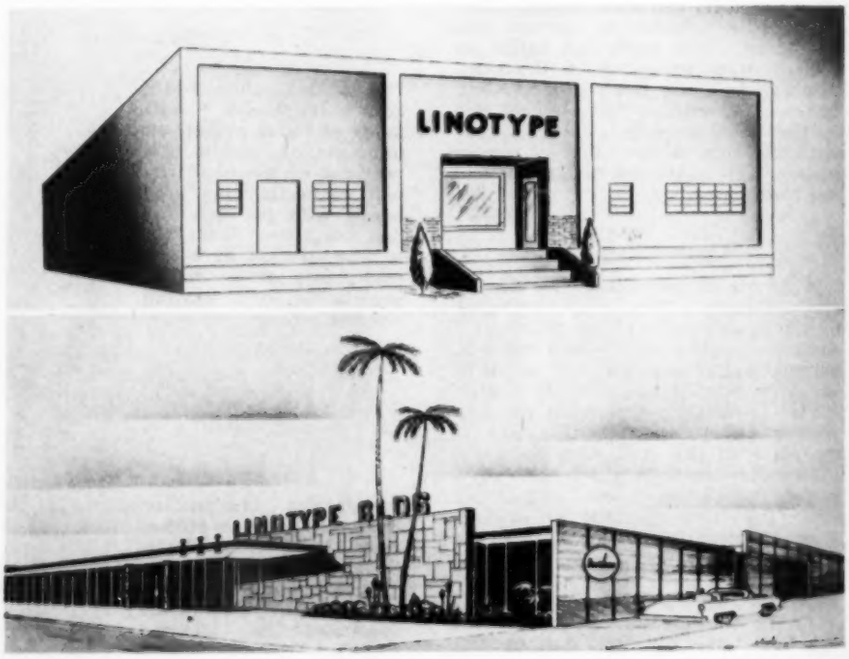
Discussing in some detail the many types of films presently being used for packaging, Roser emphasized at the outset the extreme importance of care, caution, and constant checking in the printing of plastic films. He stated that, while multicolor printing has become a commonplace in the packaging industry, successful operation demands precautions not normally required in paper printing, to the extent that "regular printing problems become almost secondary to the chemical-physical problems."

The modern converter, like the modern printer, must have good sources of supply for his materials and inks, "but most important he must have a well-staffed control laboratory and well-staffed and well-equipped research laboratory.

"When a converter is running a job—throughout the entire job the control laboratory must be working with the pressroom, constantly checking such things as flexibility of films, alkali resistance, blocking or sticking, odor (will product be contaminated), ink adhesion, grease and oil resistance, moisture vapor transmission, paraffin bleed, acid resistance, scuff resistance."

Anything, Roser said, can be packed in a film or in a combination of films to achieve almost any end use; and all films can be printed successfully, but only "if you will check, check and check."

Western Printing Manager Named—Western Printing Co., New York, N. Y., recently announced appointment of Norman A. Bruml as sales manager. Bruml, a former salesman with Western, was president of Automatic Projection Corp. for five years prior to his appointment as Western sales manager.



Mergenthaler Linotype Agencies in San Francisco and Los Angeles moved into new buildings in June. In San Francisco, the Linotype Agency moved into its building at 155—12th St. (see upper illustration). The site in San Francisco was chosen for its convenient access by automobile and bus. Free parking space is available. In Los Angeles, the Agency will occupy quarters at 1212 Albany St., where the regional office of Davidson Corporation, a Linotype subsidiary, also will be housed (see lower illustration). The air-conditioned structure features large front picture windows. The floor space is nearly double that formerly available.

Technical Papers

TAGA Listens to Many Important to Graphic Arts

By ARTHUR W. ZIMMERMAN, Jr.

The Technical Assoc. of the Graphic Arts could well be described as "bigger and better than ever" at its annual meeting at the Edgewater Beach Hotel, Chicago, May 7-9. A total of 298 persons attended the meeting.

Among the non-technical events of the meeting was the presentation to each past president of TAGA, including the immediate past president, Paul J. Hartsuch, a Certificate of Appreciation. These framed Certificates offered proof that "old workhorses aren't always forgotten," as one past president said.

The technical program consisted of 25 presentations. On Monday morning, May 7, William C. Walker presided over the first session. General topic of the session was Presswork. Opening remarks were made by Paul J. Hartsuch, and then the technical program got underway.

Precise Measurement of Press Register

Subject of the first paper was *Precise Measurement of Press Register* by F. K. Loomis, R. M. Brink, and Malcolm Graham, Springdale Laboratories Div., Time, Inc.

While testing a prototype of a new, double six-color press for printing *Life* magazine, errors in printing register of a random nature, varying up to plus or minus 0.035 in., were found. Since their goal was consistent register of plus or minus 0.002 in. to 0.003 in. in four-color printing, such mis-register was intolerable. Time research men wanted to know whether it was due to the printing process itself or to a mechanical deficiency in the press. Since they were operating at approx. 1500 linear ft. per min. web speed, tests to run down the trouble would have consumed vast amounts of paper and any results would have been open to question. So they decided to develop a method of testing mechanical performance independent of the paper.

The gearing arrangement of the press under test is: Two large impression cylinders are connected together by means of a bull gear of the same pitch diameter as the gears on the impression cylinders; the plate cylinders are geared in a ratio of 3 to 1, directly to the impression cylinders; the whole assembly is driven through a vertical drive shaft which, in this case, drives on one of the impression cylinders. Small, electromagnetic pick-ups were installed on the press near the plate cylinder gears. On the gears were mounted small projecting studs of steel which were so spaced as to pass within approx. 0.10 in. of the magnetic pick-ups. The pick-up will put out an induced voltage whenever the metal stud goes by. The positions of the studs were adjusted so that for any two cylinders under test, one passed its pick-up a fraction of a second ahead of the other. Outputs of the pick-ups were then run to a Tektronics Model No. 512 Oscilloscope. The pattern of the trace on the oscilloscope tube can easily be translated into thousandths-of-an-inch mis-register of the plate cylinders. Further testing showed the considerable and varying amounts of mechanical mis-register had decided cyclic characteristics. Since the plate cylinders are geared directly in the ratio of 3 to 1 on the large impression cylinders, and the cyclical effect observed was 1 in 3, attention was immediately focused on the large cylinders.

There are two causes of cyclic variations. One is dynamic unbalance and, the second, gear eccentricity. Very precise measurements of these gears showed that there was a total indicated run out of something of the order of 0.003 in. on one, and 0.0015 in. on the others. Precise calculations of eccentricity then showed that by some fluke the worst possible mesh points had been hit upon when the unit was assembled, so that high was meshing to low and vice versa. The gears were shifted on their hubs and the cylinders realigned. While an improvement resulted, this still left much to be desired.

The cylinders were then removed and dynamically balanced, and when replaced in the press showed little significant improvement. Time researchers then went back to the gears and found that by running

New officers of the Technical Assoc. of the Graphic Arts, Inc., elected at TAGA's Annual Meeting, Edgewater Beach Hotel, Chicago, May 7-9, 1956, include: (left to right, front row) Frank M. Preucil, color research, Lithographic Technical Foundation, Chicago, as second vice president; Robert E. Rossell, executive director, Research and Engineering Council, as president of TAGA; Philip E. Tobias, research director, Edward Stern & Co., Philadelphia, Pa., re-elected secretary-treasurer; Virgil P. Barta, head, research department, Rochester Institute of Technology, Rochester, N. Y., elected first vice president; (left to right, back row) William Reid, Graphic Arts Research, Battelle Institute, Columbus, O., as a director; Paul J. Hartsuch, Interchemical Printing Ink, Chicago, who is immediate past president of TAGA, as a member of the board; and George S. Hammer, plant superintendent, Forbes Printing & Lithographing Co., Boston, Mass. to the board of directors.

them with a minimum amount of backlash, significant improvements could be obtained. The gears which they were using, however, had not been designed to run with the small backlash tolerances which they were demanding. Therefore, a new set of gears, designed and built to closer tolerances than had been used, were installed. Proper meshing of these gears and careful adjustment of their backlash showed great improvement. They have now changed total mechanical mis-register from approx. plus or minus 0.035 in. to plus or minus 0.003 in., and this has been done without running any paper through the press.

They checked themselves during the tests with printed samples and found that as they progressed with the mechanical correction the printed mis-register improved with it. There is not direct linear relationship between mechanical mis-register, as measured by this technique, and printed mis-register. But Time research men can safely say that unless the mechanical mis-register approaches the values which they now have it will not be possible consistently to print to the degree of accuracy which they require.

Flatbed Press Stability

The second paper in the Presswork session was on *Stability of Flatbed Presses* by W. Lenaarts and J. van Wees, IGT, Amsterdam, Holland, and presented by R. E. McEachron, Miehle Printing Press and Mfg. Co.

In order to print correctly with letterpress equipment, it is necessary, among other considerations, to maintain the proper tension between cylinder bearers and bed bearers and to maximize the stability of the printing press. Too much tension between the bearers will result in excessive wear; too little will result in the cylinder lifting from the bed bearers when printing a large form. From measurements made by Lenaarts and van Wees it became evident that most of the letterpress units in the Netherlands were improperly adjusted; usually the pre-tension was not great enough. Stability, or resistance against deformation, of a printing press was found to be primarily determined by: Stiffness of the sideframes, stiffness of the cylinders, stiffness of the cylinder axes, stiffness of the bed and the support of the bed. When a crank shaft and connecting rod are used to drive a printing press, a recess in the lower parts of the frame is necessary. It is this part of the press which determines the strength of the frame. It would be a great improvement if a construction could be devised in which no recess would be necessary, commented Lenaarts and van Wees.

The next paper, *Estimating of Printing Quality of Letterpress Inks*, was given by J. H. Albrecht, German Graphic Arts Research Institute, Munich, Germany. This paper consisted of a description of the testing working being done at the German Graphic Arts Research Institute on letterpress inks.

The presentation, *Splitting of Ink Films*, presented by D. Smith, Interchemical Corporation, New York, N. Y., was a motion picture. This film greatly slowed down the action of the ink film splitting at the nip.

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37th ANNUAL CONVENTION
OF THE INTERNATIONAL ASSOCIATION
OF PRINTING HOUSE CRAFTSMEN, INC.
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No conclusions were reached on the basis of completed experiments. But the method was offered as holding promise of future benefits in this field.

Survey of Litho Troubles

The final paper in the Presswork session was *Survey of Lithographic Troubles* by M. H. Bruno, Lithographic Technical Foundation, Chicago.

An industrial cooperative laboratory like the Lithographic Technical Foundation must do a lot of things besides research, Bruno said. One of the most important of these is the analysis of plant problems referred to LTF by its members mainly by correspondence. The increase in number of paper picking problems referred to the lab in 1954 was due mainly to LTF's work on picking and the development of the LTF Pick Tester. Also, the increase in inquiries about instruments in 1954 was due to the introduction of new instruments like the LTF Contact Printing Lamp and the LTF Pick Tester at the end of 1953. One significant trend in the chart: The sharp reduction in the number of platemaking problems referred to LTF. In 1955 the number was only half what it was in 1953. We believe this reflects the impact of many important developments in platemaking in recent years and success in disseminating the new information.

When LTF researchers go into a plant to investigate a problem, they rarely find that it is caused by just one thing. Quite often, too, the causes are things that the men have been doing for years. There are so many variables in the lithographic process that some are bound to cancel out. However, as soon as some of the variables are eliminated or changed, things that never bothered before can become sources of serious trouble.

For example, many plants experience more trouble than usual immediately after installing air conditioning in their platerooms. This is usually caused by variations in coating thickness, which could be, and often were, cancelled out by the effects of temperature and relative humidity. In an unconditioned plant sensitivity changes are usually blamed on variations in temperature and relative humidity. Coating thickness has just as much effect on sensitivity and complete control of platemaking is not possible until the thickness of coatings is also controlled.

Color Reproduction

The TAGA session on the subject of Color Reproduction was held on Monday afternoon, May 7, with Robert M. Leekley, presiding. J.A.C. Yule and F. R. Clapper's paper on *Additivity of Ink Densities in Multicolor Halftone Printing* was delivered by Mr. Yule. Both men are with the Research Laboratories, Eastman Kodak Co. H. E. J. Neugebauer, RCA Victor Co., Ltd., of Canada, presented a paper on *The Colorimetric Effect of the Selection of Printing Inks and Photographic Filters on the Quality of Multicolor Reproductions*. Also during this session a motion picture was shown on *Printing Ink Goes to College* which illustrated the research work being done at the National Printing Ink Research Institute, Lehigh University, Bethlehem, Pa. The film was introduced by Dr. A. C. Zettlemoyer of Lehigh and the NPIRI. Gordon S. Allen, of J. F. Crosfield Ltd., London, Eng., gave a paper on the subject of *A Color Correction Scanner*. This included a discussion of how the Crosfield firm proceeded in defining the function of a color scanner and the requirements for such equipment which were finally laid down. Allen then went on to describe the equipment as devised by Crosfield, Ltd. At this point, the firm has a prototype being used for testing and experimental work.

A final paper in the Color Reproduction session was one by Charles H. Borchers, supervisor, Paper and Ink Dept., LTF, on *Correlation of Paper Tests to Troubles in Lithography*. This paper was devoted to a discussion of tests for picking and tinting and to illustrating the degree to which LTF tests correlate with press experience.

It has been demonstrated in the past that the LTF Pick Tester duplicates the press variables important in picking. Excellent correlation has been found between the Pick Tester and pick tests made on the press. Poor correlation, however, has been reported between the LTF Pick Tester, the Dennison Wax Test, and a pick tester based on the letterpress principle.

There are a number of different types of picking. Briefly, with uncoated papers the most common form of picking is blistering or splitting resuelting from internal rupture of the paper. In some casese, papers fail when individual fibers pick from their surfaces. In other cases you may also notice that the printing has a fuzzy appearance because fibers have been lifted but not removed.

Coated papers commonly fail by body stock rupture and less commonly by coating pick. Coating pick may be caused by brittle coating, improper bonding of the coating to paper, or by fibers giving way in the base stock below.

Over the past year, LTF researchers have accumulated a considerable number of case histories. Here are some of the observations made from that data: The Coated-Two-Sides papers studied with pick values below 6 showed picking to various degrees during printing. That is not to say that all Coated-Two-Side papers that

have a pick value below 6 will automatically give picking troubles, but LTF data definitely shows that, on large presses, if you are printing large solids, particularly at the trailing edge of a sheet, and if tacky inks are needed for quality jobs at normal press speeds, the paper should have a pick strength of at least 6.

Boards and uncoated papers can be satisfactory with a pick strength of about one-half number lower since conformation of the offset blanket to their surface is generally not as great.

Any easing of the forces exerted on the paper surface by the ink as a result of lowering ink tack, reducing press speed, or by printing only halftones and linework will allow the use of weaker papers. This, for instance, suggests the observation that paper with a pick strength of 5 should be satisfactory for work having small solids away from the trailing edges or where less tacky inks are used. For halftones and linework a pick strength of 4 should be all right. On this basis, papers with a pick test of 3 or less are then considered too weak for normal offset operation.

Last year the LTF lab pick tested about 90 coated letterpress publication papers. While the LTF Pick Tester was not designed for testing letterpress papers, the data researchers were able to get showed a favorable correlation with press experience. The 90 papers tested ranged in pick strength from below 1 to 5. It was reported that papers having pick values of 3 and over were generally satisfactory for letterpress publication printing. From this, it appears that the LTF Pick Tester may be of some use in testing the pick strength of letterpress papers.

Another of the problems referred to the LTF lab regularly is tinting. The exact causes of the tinting emulsion are not known. Often a printer is able to stop tinting by simply changing to another stock. But when the original stock is tried again, tinting shows up very quickly. Although ink, fountain solution, and condition of plates are not above suspicion, researchers at the LTF lab believe that the paper used can be a source of surface active agents capable of producing tinting.

Tinting troubles have been almost entirely limited to coated paper. The LTF lab has, therefore, tried a number of tests over the years to measure the paper coating's ability to lower the surface tension of water and cause tinting. Tests in which a phosphoric acid solution with a pH value of 3.6 was used to dip samples of coated papers indicated that if paper makers used materials whose surface activity can be suppressed by the fountain solution acid tinting troubles might be greatly reduced. Other work in this tinting study has also led LTF researchers to the theory that surface active agents in coated paper are more or less concentrated on the surface of the sheet.

Printability Session

The Tuesday morning session of TAGA, May 8, on the subject of Printability was presided over by Marvin C. Rogers. The first paper of this session, presented by G. R. Sears of the Institute of Paper Chemistry, was on *Wetting of Paper by Organic Liquids* by D. Tollenaar and P. A. H. Ernest, I.G.T., Amsterdam, Holland.

The Proficorder

The Proficorder: An Instrument for Showing the Contour of Paper Surfaces, by H. H. Hull, R. R. Donnelley & Sons Co., was another paper delivered in the Printability Session. Hull began by saying that it is generally accepted by printers and by paper manufacturers that the smoothness of paper surfaces is an important factor affecting printability. There is considerable experimental evidence to confirm it. However, there is no generally satisfactory means for measuring smoothness. Hull believes the term smoothness (or roughness) is not sufficiently precise to indicate the variables associated with printability, and that the term "paper surface contour" is to be preferred. This term infers that such factors as wave-length of the irregularities, and their shape (for example, are there steep sided holes in the surface?) are to be considered.

The Proficorder, manufactured by the Micrometrical Development Corp., Ann Arbor, Mich., is an instrument useful for drawing the profile of paper surfaces. The instrument utilizes a probe stylus attached to a differential transformer. It draws a true profile showing irregularities of long wave length, and also enables the rate of travel of the probe to be reduced so that the finer detail in the paper surface may be indicated.

Two papers were given in this session on the general problem of correlating subjective evaluation of print qualities with objective or numerical standards. The first was *Problems in Measuring the Quality of Black Solid Prints,* by J. M. Fetsko, and A. C. Zettlemoyer of Lehigh University, and W. C. Walker, West Virginia Pulp and Paper Co., and delivered by Zettlemoyer.

Zettlemoyer said work at the Ink Institute had begun with the black solid, which was regarded as the most readily evaluated type of print. The Photovolt and the Densichron were used for measuring diffuse reflectance of samples. Further investigations were made with a goniophotometer and visual checking under controlled conditions. The results showed some differences between each of the methods. Comparative analysis indicated that the range of angles lighted and view by the optical system might be the cause of the different order of results between the Photovolt and the Densichron. Comparisons with visual ratings of a series of prints indicated that the geometry of the optical system might be another cause of discrepancies between the Photovolt and Densichron. Work is underway to develop an instrument for producing a rapid numerical evaluation of uniformity.

Subjective Graininess Evaluation

The other paper dealing with the general problem of correlating subjective evaluation of print qualities with objective or numerical standards was one prepared by George W. Jorgensen, supervisor, Lithographic Technical Foundation. Jorgensen's paper was titled: *Subjective Evaluation of Graininess in Lithographic Images.* His conclusions were that the Pair Comparison method when applied to graininess (an appearance, a mental impression) evaluations of a group of press sheet images gave a set of numerical response values which were in good agreement with objective granularity (a physical measurement of the property of the press sheet that causes the mental impression of graininess) values derived from microdensitometer traces. While this is not a proof of the correctness of the granularity method, it does increase LTF researchers' confidence that they are on the right track. They will not be able to properly evaluate their methods until their study has covered a considerably larger number of samples and conditions, Jorgensen said.

Paper-Printing Quality Relationship

K. L. Strachan, of R. R. Donnelley & Sons Co., Chicago, delivered a paper in the Printability session entitled, *The Relationship Between Paper and Letterpress Printing Quality.*

Photosensitive Materials

C. A. Horton presided over the TAGA session on Photosensitive Materials, Tuesday afternoon, May 8. To open the session, W. H. Martin, Harris-Seybold Co., delivered a paper on *A Modified Casein Coating for 300 Line Screen Reproduction of Smooth Grained Plates.* In this paper Martin described the process of modifying a commercial brand of lithographic casein by reacing it with glyoxal and by addition of a solubilizing agent (guanidine carbonate). This coating was mixed with water and ammonium chromate diluted with water to 2 deg.-3 deg. Baume and was coated on pumice grained metal plates. The ingredients of the coating were compounded to withstand a temperature of 70 deg. C for five days and print a 300 line screen for a minimum of 10,000 impressions. Sponsor of this research project was the U. S. Army Corps of Engineers.

Raymond Alfaya, Photo Products Department, E. I. du Pont de Nemours & Co., Inc., Parlin, N. J., delivered a paper on *Reciprocity Failure in Orthochromatic Litho Films.* Reciprocity failure was shown to be a most significant factor in the exposure of orthochromatic litho films. Reciprocity failure is a term used to describe the experience that a long exposure to low intensity light will not, in general, produce the same photographic effect as a proportionally short exposure at high intensity. A few of the ramifications of this failure were discussed.

Dimensional Stability of Films

A paper on the *Effect of Base and Emulsion Thickness on Dimensional*

Stability of Graphic Arts Films was presented by John M. Centa, Photo Products Department, E. I. du Pont de Nemours & Co., Inc., Parlin, N. J. Centa said that dimensional stability of stable base films is better than conventional acetate type bases by a factor of 3 to 5 times. These stable films give satisfactory size-holding performance in a wide variety of new semi-critical applications. However, shop temperatures and humidities must still be controlled with stable films when extremely precise size-holding or reregister requirements are specified. Among the shop techniques that will influence stable base performance and which must be controlled to obtain precise registration include: (1) Condition films to shop working temperature and relative humidity in *unsealed* packages for 24 hours before use. (2) Maintain exposing, stripping and platemaking areas at the same relative humidity and temperature if at all possible. (3) Use relatively fresh fixer of the same chemical composition, and control immersion time in fixer and wash water within reasonable limits. (4) Squeegee and allow processed films to dry at room conditions for at least 2 hrs. after they are "finger" dry, before critical registration usage. (5) Store processed film sets under the same conditions. (6) Remember that seasonal relative humidity variations are substantial and that *absolute* size match will be achieved only when stored films are returned to the same conditions under which they were originally made and used.

F. J. Drago, Eastman Kodak Co., delivered a paper on the subject of *Techniques for Evaluation of High-Contrast Materials Used in the Graphic Arts.*

Composite Negative Assembly

C. W. Simonds, Eastman Kodak Co., gave a presentation on *A Photographic Method for Simplifying Assembly of Composite Negatives,* which was actually a demonstration of the process. In this process, Autopositive film, which will accept an image in white light that can be erased with yellow light, was taken through the process of assembling a composite negative. This composite included straight text, a halftone, an enlarged spot of halftone screen, and a spot of open white in the middle of the halftone plus two lines of type in the open area and a line of reverse type. All this is assembled in a series of white light and yellow light exposures on the Autopositive paper.

General Session

The Tuesday afternoon, May 8, general session of TAGA was presided over by Frank Ireland. D. J. Byers, Springdale Laboratories Division, Time, Inc., and H. L. Pinkerton, Graham, Crowley and Associates, Inc., Jenkintown, Pa., opened the session with their presentation on *A Method for Measuring the Etching Strength of Ferric Chloride Solutions.* In making copper photoengravings, Byers began, knowing the etching strength of the ferric chloride bath is important in saving time and preventing spoilage. If it were possible to predict the etching time, the usual cycle of etch, inspect, etch and inspect could be eliminated. Time, Inc., became interested in the problem of controlled etching in connection with the use of negatives made by a scanner. For if full benefit is to be gained from the scanner, the etching must be controlled.

The measuring equipment desired would have to be effective for solutions having copper concentrations in the range of 0.5 oz. per gal. to 2.5 oz. per gal. Within this range, conventional redox cells are almost completely insensitive to even fairly large changes in copper content. This difficulty was overcome by use of a method in which the greatest potential to be measured is only about 50 millivolts, whereas in the conventional redox cell, it is at least 600 millivolts.

Time, Inc., plans to extend the method developed for this process to other concentrations of copper and to other temperatures.

Also presented in the general session was a paper prepared by C. W. Christensen, Graphic Arts College of Denmark, Copenhagen, Denmark, and presented by Joanne L. Heal, Lithographic Technical Foundation, on the subject of *A Method for Measuring the Amount of Gum Adsorbed on Zinc Lithographic Plates.*

Howard Rosenthal, RCA Laboratories, Princeton, N. J., presented a paper on *Graphic Arts Techniques in the Deposition of Phosphor Screens for Color Television Tubes.* The requirement that the phosphors in color television kinescopes be deposited in ordered geometrical patterns has resulted in the adoption of Graphic Arts techniques for applying the phosphors, Rosenthal began. Among these are silk screen process, which made possible the first commercial color television tubes. Other methods for printing phosphor patterns on flat glass include the offset letterpress process. Also described is the photosensitive binder process for depositing phosphors directly on the kinescope faceplate. After reviewing several other Graphic Arts techniques being used in television tube manufacture, such as correcting distortions and varying line widths in making focusing grill kinescopes, Rosenthal concludes that there are many places in the electronics industry where Graphic Arts techniques are assuming a major role. In the past few years, he said, for instance, printed circuits have replaced conventional wiring in a sizable portion of television receiver manufacture. "Undoubtedly," he continued, "further new applications of these techniques will continue to be found."

Printing of Three Color Phosphor Patterns on Flat Glass by Offset Letterpress was the title of a paper by D. L. Collins, J. V. D. Eppes, J. M. Fetsko, C. E. Moore, W. C. Walker and A. C. Zettlemoyer of the Institute of Research, Lehigh University. Dr. Walker is presently with West Virginia Pulp & Paper Co.

The prime consideration in selecting a printing process was the absolute necessity of preventing intercontamination of the three phosphors during printing. This requirement eliminated gravure and lithographic printing and suggested a letterpress process. Secondly, the printing surface was flat glass so that no direct or cylinder letterpress process could be used. A Vandercook 22 in. by 34 in. Single Color Offset Proof Press was selected from the basic laboratory studies since only minor mechanical changes were necessary to permit printing on flat glass. The use of conventional ink vehicles was prohibited by the requirement that all components except the phosphor be completely burned off at temperatures not exceeding 425 deg. C. A further limitation was the necessity of avoiding contamination by any material which would poison the phosphor. An ink system containing phosphor dispersed on a roll mill into a methacrylic resin and ester vehicle system produced acceptable screen patterns on coated glass. This process was later adapted to three color printing on a Vandercook 604 Four Color Proof Press.

Method for Testing Resistance

A. J. Allegretti, R. R. Donnelley & Sons Co., Chicago, presented a paper on *Tensile-at-the-Fold: A Method for Testing Resistance of Paper to Heat Degradation.* This is a method which correlates and predicts by laboratory testing procedure the ability of coated paper stock to withstand the brief but intense temperatures of heat-set printing press operations and yet produce a crack-free fold which will withstand bindery and mailing operations.

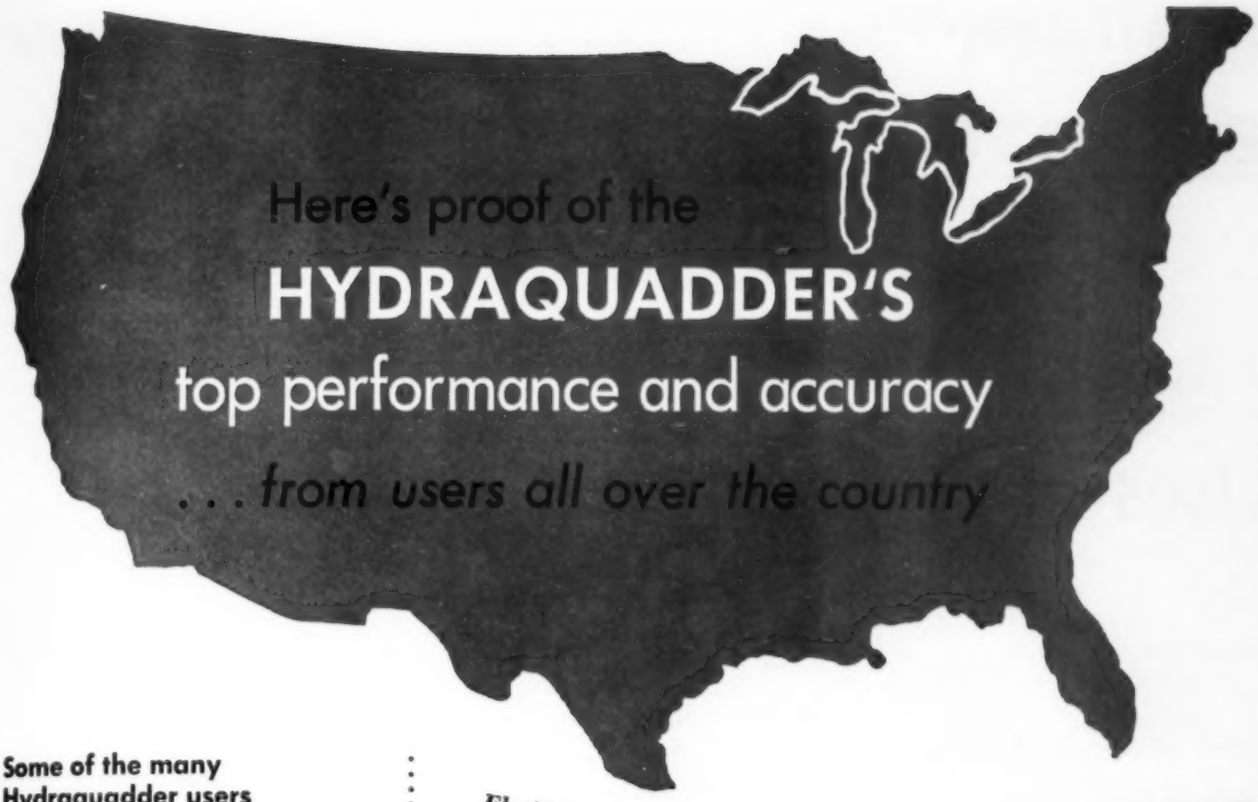
To determine directional qualities, samples of paper are taken in both directions. From their experience, Donnelley research people say the vast majority of troubles occur on presses where the fold is made in the machine direction. The paper sample is looped (but not creased) and held with a paper clip or staple on pins. The samples are placed in a forced draft oven for 5 min. at 360 deg. F. At the end of the heating period a fold is made with a 2 in. diameter, 1 kilogram roller. This fold is done in the oven on a glass plate thereby insuring minimum moisture variation. A tension device, such as a Dillon Multi-Purpose Machine, is then used for testing the sample after the fold has been made and clips removed. Correlation with press experience has been good.

The experience gained with the TAF has led to its use in quality control stations in the Donnelley pressrooms. Donnelley researchers feel use of the method will aid materially in reducing shipments of stock that do not have the properties required for use on modern, high-speed heat-set presses.

Better Methods Film Contest

The Industrial Management Society is again sponsoring a Methods Improvement Film Contest, featuring the Ralph H. Landes awards. The competition is open to industrial and educational institutions.

For further information about rules and regulations, write to Industrial Management Society, 35 E. Wacker, Chicago.



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New York Post
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J. D. Pearson Typesetting Co. Chicago, Ill.
Philadelphia Inquirer
Riverside Press, Cambridge, Mass.
Stein Printing Co., Atlanta, Ga.
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LEADERSHIP THROUGH RESEARCH

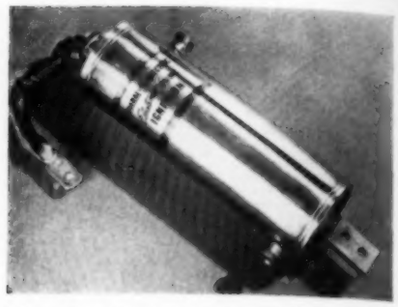

Fig. 22.—View of General Electric's electronic tube (ignitron) employed in printing press drive apparatus.

Uses of Electronics In Graphic Arts Industry

By FRANCIS A. WESTBROOK

PART VI.—
PRESS DRIVES

One of the most important applications of electronic equipment in the Graphic Arts field is for newspaper and rotogravure printing press drives. The press drive developed by General Electric Co. consists of a simple electronic tube, or ignitron rectifier (Fig. 22), which converts the alternating current power to direct current, which is used for adjustable speed direct current motors driving the individual units of the press and folder.

Before proceeding further it will be worth while to outline very briefly what the ignitron is and how it works. In the first place, it is a gas-discharge, mercury-pool-type cathode tube in which the arc is started in each alternating current cycle by an ignition electrode. It is of the half wave type where current passes through the tube only during the positive part of the cycle. The tubes may be used in the 125 v. to 250 v. fields. For direct current rectification, such as for printing press drives, ignitrons are available in a variety of sizes for direct current outputs of from 40 to 1000 kw. at d.c. voltages of 125, 250, 600 and 900.

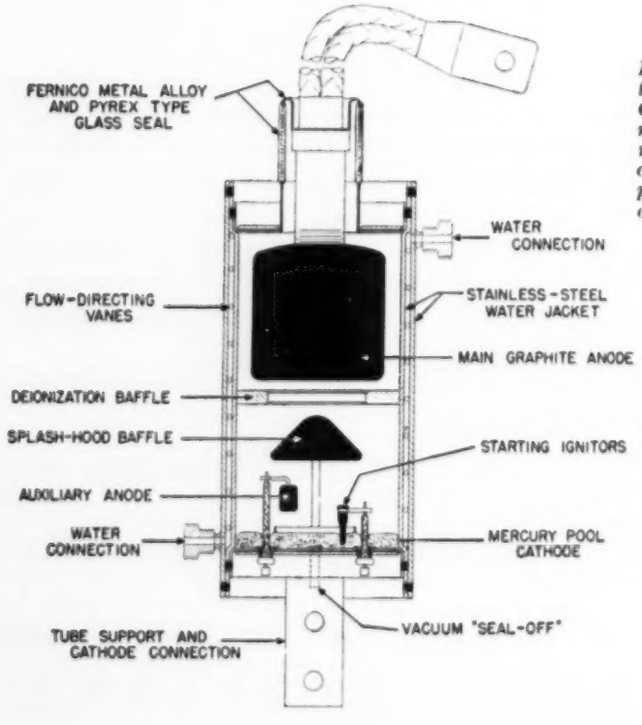

Fig. 23—Cross section diagram of General Electric ignitron for power rectifier service in connection with printing press drives.

An understanding of what takes place in the ignitron will be helped by referring to the cross-sectional view shown in Fig. 23. There is a mercury pool at the bottom into which dips the point of the ignitor. When a current of 10 amp. to 30 amp. is passed through the latter a cathode spot is created at the point of immersion of the ignitor in the mercury. Ionization spreads all through the volume of the tube from this spot and the electrons drawn from the pool pass to the positive anode. The passage of the electrons through the gas filled tube ionizes the gas, which results in the low arc drop characteristic of gas-filled tubes.

When the current increases to over 20 amp. the cathode spot in the mercury sub-divides into a sufficient number of spots to supply the anode current. When the current begins to decrease at the end of a cycle the number of cathode spots decreases and at zero current they disappear altogether. Ionization rapidly decays at this time to a value permitting the application of the inverse voltage without arc-back; *i.e.*, current flowing in reverse with the anode acting as a cathode.

The amount of mercury evaporated by action of the cathode spot is about 0.75 gram per each 100 ampere-seconds that the tube con-

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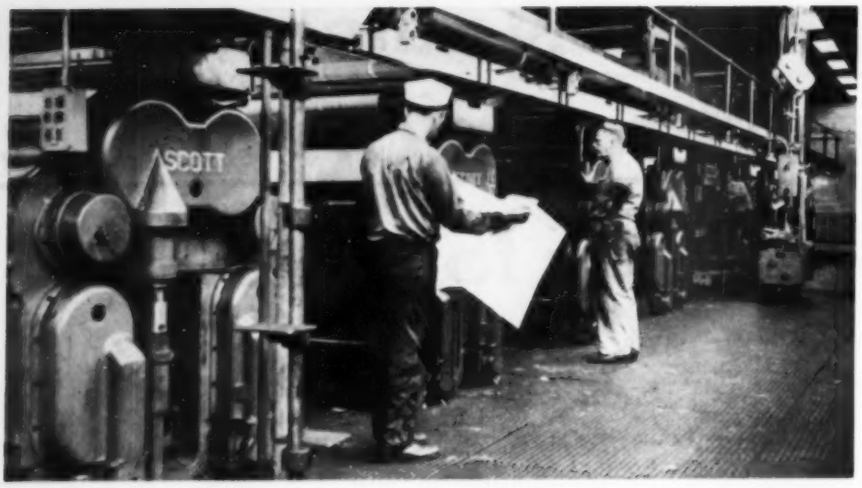


Fig. 24.—Pressroom, Bergen Evening Record, *Hackensack, N. J. This Scott High Speed Press consisting of eight units and two folders is driven by a General Electric electronic drive and is geared to operate at 50,000 papers per hr.*

ducts. This is condensed on the water-cooled walls of the tube and flows back to the pool. The arc drop varies from about 12 v. to 18 v., which makes for high over-all efficiency even at low output voltages.

With such a provision for the use of individual adjustable speed motors for each press unit the same motor can be used for threading, inching, production runs and braking. They are standard d.c., externally ventilated, compound wound motors and any grouping can be powered by the ignitron rectifiers. If one or more motors of the combination become inoperative for any reason those remaining in service have sufficient capacity to carry the load at reduced speed. Should as many as one-third of the motors go out of service, all the press units can be operated at somewhat better than half speed with the largest combinations. This, of course, is advantageous in maintaining at least some semblance of production schedules under emergency conditions.

As the operation of these drives is controlled from conventional pushbutton stations no special training of the operators is called for. The motors are mounted on the press.

The conversion, or rectifying, equipment with the selector switches and other controls are installed in metal cubicles which may be conveniently located away from the presses. This helps to avoid overcrowding the press and reel rooms. By means of the selector switches the power and control circuits can be matched for whatever press combination is desired. This makes for flexibility in production schedules which may vary from day to day.

Maintenance of the electronic press drive is greatly reduced because many moving and wearing parts are eliminated, all of the elements are standard and can be readily understood by the plant electrician.

In this type of drive the control panels are factory assembled and are delivered to the installation point as complete units. The panels are bolted down in whatever location is selected as most convenient in a particular plant and are then interconnecting. The location can be almost anywhere where the equipment will be out of the way as along walls, in the basement, or on a balcony. It is not necessary to air condition the control room nor are existing air conditioning installations interfered with in any way, states G-E.

The Bergen (N J.) *Evening Record* operates a Scott extra high speed, eight unit, two folder press (Fig. 24) in which are produced papers at the rate of 50,000 copies per hr. General Electric explains: "Some of the reasons making this possible are the smooth jog for plating-up and the fast, smooth acceleration from threading to full speed which reduces web breaks. There is no drop in efficiency down to half speed and no power is lost in secondary resistor heat. The high power factor also reduces kv.a. demand and charges."

King's Typographic Workshop Excellent

An all-day instructional Typographic Workshop attracted 200 Graphic Arts people to The University of Texas, Austin, Tex., recently. Howard N. King, typographic counsellor to Intertype Corporation, and Vice President of The Maple Press, York, Pa., conducted the workshop.

Sponsored by Intertype Corporation, the meeting was planned and organized by a Workshop committee represented by The University of Texas School of Journalism, Texas Press Assoc., Austin Adv. Club, Austin Club of Printing House Craftsmen, Society of Associated Industrial Editors and The University of Texas Printing Div. Claude H. Eads, Manager, The University of Texas Printing Div. and past President of Austin Club of Printing House Craftsmen, served as chairman.

Audience was made up mainly of editors, newspaper publishers, printers, trade compositors, advertising people and university journalism students.

Characteristics and proper use of old style, classic, transitional, modern, square-serif, rugged and decorative type faces were discussed in the morning session. Comparative printing quality of thirty 10 pt. type faces printed on six different kinds of paper stock were discussed in detail. Paper stock specimens included colored enamel, text, newsprint, machine-coated enamel, wove finish offset book, and dull enamel book. Sixty large charts and exhibits were used by King to illustrate proper use of type faces.

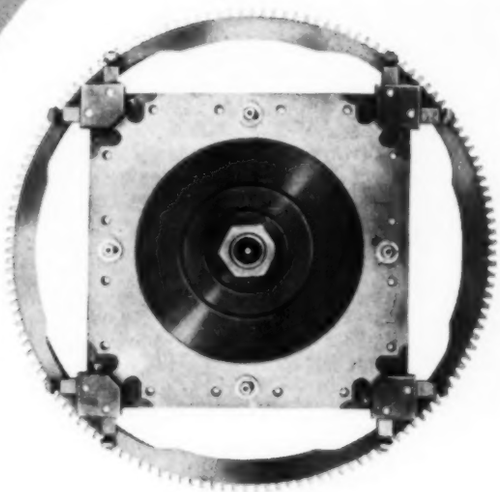
Typographic design stressing proper use of white space and type were also discussed. Suggestions for improved body and head dress for newspapers, house organs, general printing and book work were discussed. Blackboard technique was used to illustrate good layouts employing art, photographs, display type, white space and body matter.

Visual aids and 60 exhibits showing pieces produced by American and foreign printing concerns were shown.

Small group discussions were held on individual problems as to good typography and layout. Analyses of individual newspapers, offset and letterpress publications and general printed pieces were presented.

Howard King, Intertype's typographic counsellor, dissected all kinds of typography from general commercial printing to newspapers and magazines.

STAR *Precision* MOLD DISK



FOR INTERTYPES...

The new Star Mold Disk for Intertypes is now available. This disk is complete, ready to install. The swivel bolts and nuts are a part of the Star Intertype Mold Disk. This saves you the extra cost of purchase and the extra time for installation.

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Specify Part No. U-83.
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THE PRINTING MACHINERY COMPANY
436 Commercial Square
Cincinnati 2, Ohio

People Can Be a *Plus Factor*

By WARREN G. WHEELER, JR.*

**Personnel Director, South Bend (Ind.) Tribune and President of Newspaper Personnel Relations Assoc. Abstract of address delivered before Great Lakes Mechanical Conference, Milwaukee, Wis., Jan. 1956.*

PART IV.

Which brings us to our next topic. The matter of picking better foremen and supervisors.

You may feel that these choices are strictly your own business and that nobady in any other department should be butting into your affairs. After all what does a personnel man know about your department? You're probably right; he knows next to nothing about the *technical* side of your job.

But he should, if he's worth his salt, know a good bit about people. People are his specialty just as printing or stereotyping or whatever is yours. If you were putting new lighting or air conditioning in your plant you'd probably call an electrician or an air-conditioning man.

So why not—when you are looking for a man to lead people—why not ask the help of those who deal in people? Your own personnel department, if you have one, may or may not be able to help you. Newspaper personnel departments vary widely in their duties and responsibilities. If you cannot get qualified assistance in your own plant you still may obtain help by geeting a personnel expert outside your organization. He may not know the newspaper business but he will know people.

Suppose, for a moment, that you must pick a new foreman by your self. You may have to make your decision under crisis conditions—Joe has quit and you need a new man on the ad alley right now. You have daily production and other problems to worry about and you want to get that matter of the ad alley off your back right now. So you think fast. Who is the best man I've got over there? Who really turns out the type? Who knows the job inside and out? Who gets along with the other fellows? Which one of these guys is going to be loyal to me and the company? Who has seniority?

You run down this mental list of all the obvious things you want in a good supervisor. But nobody seems to have all these qualities and you have to start balancing the good against the bad. You take the man who seems to have the most good qualities.

You may be lucky in your choice, but unfortunately a man can have all the qualities we've covered and still be a complete flop when it comes to taking over as ad alley foreman. The reason is that we haven't taken the time to find out about some of his less obvious qualities—we haven't really any measure of his leadership abilities.

What are some of these qualities we need to know more about?

1. His intelligence, his ability to solve the many problems, not only mechanical, but the abstract, complex type of things involved in overall planning and running a department.
2. His perseverance: Does he stick to things even when the going is rough?
3. His self-reliance: Can he stand on his own two feet, make his own decisions or is he going to run to you with a dozen silly questions and little problems every day?
4. His leadership ability: Have others accepted him as a leader in other situations, do people look to him for advice and respect his decisions and ability. A man who never has been accepted as a leader or accepted the responsibility of leadership in his younger days seldom becomes one overnight. We want to know, too, how well he has carried the load of leadership in his earlier experiences or whether he nearly worked up an ulcer because of them.
5. His emotional maturity: Is he a dreamer or is he realistic in his thinking? Does he have a good regard for consequences or is he apt to plunge headlong and worry later. Is he going to lead people naturally or will he simply yell at them?
6. What makes him tick? Does he have the spark that makes people want to do better than others, to make more money and to be a leader or is he content with security and plodding along in the job he already has?

These are only a few of the things that we should find out about before we make a man a foreman. They are things not easily seen. If we don't look for these things it is all too easy to make a man a foreman simply because he has been a good worker and a good fellow. He may know his job to the last detail but be a complete failure when it comes to assuming the responsibility of handling people. And I believe if you'll stop to think a moment you will realize that most of your own big problems do concern people and this business of trying to get them to do a job for you. A foreman cannot do every job himself; his job is to get others to do things his way—because they want to.

Now, how can a personnel department or personnel expert help you find the right man for a foreman's spot.

At the *Tribune* over a period of six years we have gradually worked out a system which we feel is helping our department heads. We have had growing pains and

the way hasn't always been smooth. The system is far from perfect but here is how it works:

First, when we have, or expect to have, an opening we talk it over with the department head and ask him for a list of likely candidates. Our publisher may wish to add a few names; personnel records may indicate other possibilities. We talk over the pro's and con's of the men on our list. Sometimes we cut it down; other times we add to it. We try to consider every likely prospect. It gives a wider selection to choose from and thus help us find better people. And eventually, under the system we use, every candidate knows that he is being considered for advancement now or later. We feel it is better for morale if a man knows he has received this consideration —even though he doesn't get a promotion.

Then the department head contacts the men involved. He asks them if they are willing to be tested and interviewed in the personnel department in connection with possible advancement now or at a later time. It's all voluntary, but only on a very few occasions have we run into someone who wants no part of such a program.

The tests we use tell us about the man's ability to think and solve problems.

The interview is similar to that we use when hiring new people, but because we want really expert analysis we have an outside consultant come to our plant to conduct the actual interview and evaluate it.

The consultant reviews his findings with the publisher, the department head and myself. We don't always see eye to eye on his entire report. After the consultant has left we may hassle for some time before we make our final choice. But I believe we all agree that a well-trained interviewer can in an hour or so find out what it has taken us years to learn about a person—plus a lot of things we never knew about our own men—things that could be critical or even disastrous when we are deciding whether or not to give a man added responsibilities.

Certainly, the consultant gives us a lot more information than otherwise would have been available to us. Frequently, he has saved us from some pretty bad choices and helped us make better decisions than we might have on our own. And I'm sure you'll agree that the right kind of assistant can make life a lot easier for you. A bad choice can mean trouble for a long, long time.

This program costs us several hundred dollars each time we use it. But we feel that good supervisors are the key to efficient operations

(*Concluded*)

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BOOKS

Paper Handling Methods

Procedures for Paper Handling (In Transit), Materials Handling Series No. 1, has been written in clear, concise language. This helpful, trail-blazing 40-page manual is being published by the Research and Engineering Council of the Graphic Arts Industry, Inc. Generous descriptions of improper preparation of paper rolls for shipment by rail are included. But the real value of the booklet is contained in the recommendations for proper procedure for loading roll paper in railroad cars based on studies, interviews with shippers and receivers, and actual experiments. These recommended methods cover (1) Preparation and Inspection of Railroad Cars, (2) Skid Construction, (3) Skid Wrapping, (4) Roll Wrapping, (5) Car Loading of Skids, (6) Car Loading of Rolls, (7) Proper Use of the DF Loader, (8) Inspection of Lading at Point of Unloading, (9) Labeling and (10) Core Stripping.

Procedures for Paper Handling is profusely illustrated with halftones and line drawings of recommended and non-recommended methods of handling and loading roll paper in railroad cars. Other illustrations include a suggested form for Unloading Inspection Report; another suggested form for a Damage Claim; another for In-Plant and Concealed Damage Report; and others for label forms for paper stock in transit. In addition, there is a chart for determining the percentage of roll stock damage from the measurement of the depth of damage in inches and the outside diameter of the roll also in inches. For example, a 1 in. deep damaged spot will result in a 11.8% roll damage in a 33 in. outside diam. roll; the same depth of damage will result in a 9.8% roll damage in a 40 in. outside diam. roll.

This manual is not the product of an over-night effort. The work of compiling material for it began eight years ago with a committee composed of eight men. The final committee which brought the work to publication was supervised by Elliott Donnelley, R. R. Donnelley & Sons Co., and consisted of 55 committeemen. Some of the committeemen did not live to see their work published. Besides this committee, the 13 members of the R&EC publications committee worked on the manuscript. Thus, considerable time and money went into the organization and writing of this manual. Price of the book from the Research and Engineering Council of the Graphic Arts Industry, Inc., 719 Fifteenth Street, N.W., Washington 5, D. C., is $10 each.

Camera-Darkroom Seminar

Forty representatives of 22 firms engaged in phototypographic composition on a trade basis throughout this country and Canada attended the Camera and Darkroom Seminar sponsored by the Phototypography Section of Intl. Typographic Composition Assoc., May 26 and 27. The meetings were held in the offices of Modi-Graphic Corporation, Cincinnati. The gathering concentrated its discussion on camera and darkroom techniques and materials, as well as typographic modification.

Tentative plans for regularly scheduled sessions of forums, demonstrations and lectures held under ITCA sponsorship were adopted, with the next meeting to be held in September, probably in Rochester, N. Y.

Fotosetter Technical Council Holds Its Second Conference

The second Technical Conference of the Fotosetter Technical Council was held recently at the Hotel Roosevelt, New York, N. Y. The Council is made up of owners and operators of plants using Intertype Fotosetter photographic line composing machines in the United States and Canada. This independent Council was formed a year ago for the purpose of exchanging technical information and to promote the use of photographic typesetting methods in the advertising, newspaper, specialty, and commercial printing fields.

For four days, a series of panel discussions were held covering various subjects, such as; operating techniques, makeup procedures, dark room techniques, new applications for photographic typography, establishment of uniform standards of performance and quality control methods.

One day of the Conference was devoted to a joint meeting with key executives of Intertype Corporation who were invited to attend for the purpose of correlating machine research and type programs with the needs of the users.

W. E. Trevett, president of the Council in discussing the conference, said, "Our four-day session was highly successful. It marks the peak of manufacturer-user liaison. Among the highlights of the conference were the methods and procedures now in operation in many newspaper plants throughout the Continent."

The following officers were re-elected: President, W. E. Trevett, Cooper & Beatty, Limited, Toronto, Canada; Vice President, H. J. Echele, Warwick Typographers, Inc., St. Louis, Mo.; Secretary, W. E. Switzer, Philadelphia.

Members of the Board of Governors are: E. E. Carpenter, Photo Composition Co., Cleveland, Ohio; H. J. Echele, Warwick Typographers, Inc., St. Louis, Mo.; Joseph Schwartz, Westcott & Thomson, Inc., Philadelphia, Pa.; Calvin C. Thomas, St. Petersburg (Fla.) *Times;* W. E. Trevett, Cooper & Beatty, Limited, Toronto, Canada; G. E. Ursprung, Moore Business Forms, Inc., Niagara Falls, N. Y.

PIA Moves Into New Headquarters

The headquarters staff of Printing Industry of America, Inc., has moved into its new office building at 5728 Connecticut Avenue, N.W., Washington 15, D.C. Phone number is WOdley 6-1400. The building is both beautiful and efficiently laid out. Elmer G. Voigt, chairman of the Properties Management Committee, has announced that the new PIA Headquarters Building will be officially dedicated on Aug. 9, 1956. All PIA members are invited to attend the ceremonies.

Letters

TO THE EDITORS

Stereo Plate Tolerance

I wish to point out a very unfortunate misprint on page 103 of the June, 1956, issue of *Printing Equipment Engineer.* The thickness tolerance of the plates produced on the M-A-N Plate Casting Machines should read 0.0025 in. plus or minus instead of 0.025 in. plus or minus.

Charles Fritschi
Manager, Stereo Machine Dept.,
R. Hoe & Co., Inc.

Screen Process Exhibition

More than 5000 members and guests of the Screen Process Printing Association, Intl. are preparing for their Annual Convention to be held at the Sherman Hotel, Chicago, Oct. 20-22, inclusive. Robert H. Blundred, executive secretary of the association placed 103 trade exhibit booths on sale May 11. The booths are for the Product Fair for exhibiting the industry wide products in which screen process has been utilized. Samples of jobs processed are being gathered from over 30 countries and will be displayed for general viewing public throughout the three day convention. A film, forums, clinics and special sessions for members are now being finalized. Entertainment and programs are also being designed. This year the theme of the convention is *A Cavalcade of Progress.*

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More money spent on Direct Mail than on Television. TWICE as much spent on Direct Mail as on Radio. $451,000,000. MORE Direct Mail in 1954 than in 1950. (1955 will reveal STILL more and '56 . . . the sky is the limit)
$1,374,000,000. spent on Direct Mail in '54.

Is it any wonder that in three weeks recently, 181 firms ordered the NEW "Gold-Mine" BAUMFOLDER . . . to get the greatest possible profit in '56 of the most profitable printing . . . naturally, Direct Mail Printing (and it ALL has to be FOLDED . . and FOLDING is the most profitable of all operations).

It cuts. It scores. It perforates. It pastes.
(Will fold . . paste and trim 6,000 booklets an hour)

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Over twenty thousand firms testify the "Gold-Mine" BAUMFOLDER is the ONE INDISPENSABLE AUTOMATIC in their plant.

It is our pleasure to offer the fabulous NEW MODELS on pay-for-itself terms . . . and every size priced at a fraction of what you'd expect for the closest-precision-built . . . life-time "Gold-Mines."

This is the HOUR of DECISION. Won't you accept one or more than one NOW, realizing how MUCH it will COST you to try to compete withOUT it, yet costs NOTHING to OWN it, because DAILY AND FOR A LIFE-TIME "it puts money IN thy purse."

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Equipment & Supplies

(Continued from Page 22)

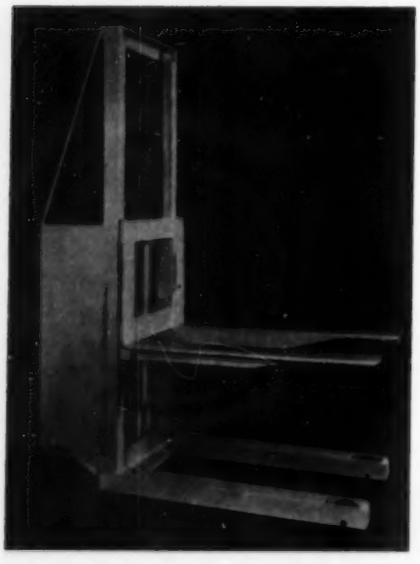
envelope is imprinted with a form for necessary job information. The cabinets are built of 20 ga. cold-rolled steel and designed so that they may be stacked in units of four or more. Base structures are also available. The cabinets and base units are finished with baked-on gray crinkle enamel. The cabinets are in four sizes; 10 in. by 16 in. to 17 in. by 22 in. For further details, please mention PEE No. 169 in your request.

Non-skid Tread Plate

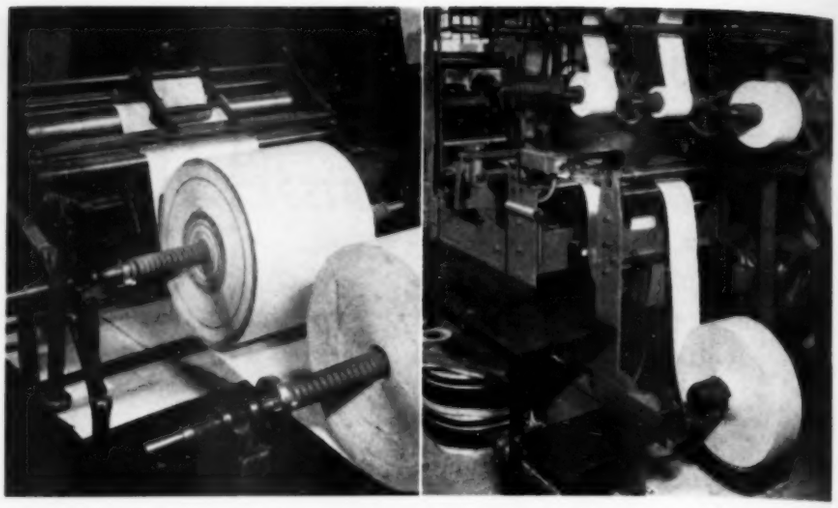
A non-skid abrasive aluminum tread plate was recently announced by Aluminum Company of America. The plate is designed for printing press catwalks and other industrial locations where oil or ink may collect on floor surfaces. The product is rolled from ingot by a method which provides a fused aluminum abrasive oxide on one surface. The layer of abrasive is metallurgically bonded to the aluminum plate. The plate is said to be corrosion-resistant and can be shop fabricated by most commercial methods, including shearing, sawing, punching and drilling. For further details, please mention PEE No. 161 in your request.

Skid Fork Lift Truck

Hydro-Lift Company recently announced a portable hydraulic skid fork lift truck for elevating or loading work at heights up to 52 in. Truck has a max. load capacity of 5000 lbs. Fork length is 56 in.; width is 24 in. Electrically operated push button controls are used to lower or



hold load in position without power. Normal rate of lowering or raising is 1 in. per sec. Lowering or raising speed can be regulated by adjusting balanced piston-type flow control valve. Truck is equipped with concealed roller bearings. Drive is powered by single or 3 ph. a.c. or 12 v. battery with built-in charger. Trucks are adaptable for operation by remote control. Another feature is the placement of casters and wheels directly under frame to permit truck to pass through aisles only slightly wider than 24 in. For further details, please mention PEE No. 165 in your request.



A pneumatically controlled expansion shaft that is designed to grip the whole inner area of any paper roll core with a cylindrical contact surface, has been announced by Pearce Development Co. The softest roll is claimed not to be forced out of round along its length by the action of the Pearce Arbor. Upon release of the air, the grip upon the core is relaxed and the shaft is freed from the paper roll. Pearce Arbors come in rigid styles in which the arbor is removed from the roll when free and rests in journals on the machine such as in the illustration at the left. At the right is shown the non-rigid style which consists of a permanently attached arbor at one end of the converting machine and turns on a base shaft. On this style, one end is open for inserting or removing the paper rolls. For further information, please mention PEE No. 171 in your request.

Production of Vinyl Film

Production and printing of Vinyl film, it is claimed, can now be accomplished without marring and scarring and without physical contact with the film. The method has been patented by Commonwealth Engineering Co. of Ohio. Air jets are used in the process. From a liquid or viscous state, the plastic flows out of its container. As it passes through the bottom of the container, a strong air stream is directed at it. This directs the plastic at right angles where it passes over more air jets. These jets support the plastic. During this time, the plastic forms into a solid. The entire operation is said to be accomplished at high speed and can be adjusted to secure various thicknesses of film. The film next passes beneath a container holding photochemicals. These are deposited on the film for a prearranged design and color combination. The film then flows beneath heat lamps where the reaction between the heat and chemicals causes the imprinting of the design. Vinyl was used as the basic material for the patent but the method can be adapted to other films such as polyethylene. There are said to be many variations as to speed, heat sources of different wave lengths and photochemicals actuated as to fixation, impregnation and type of color. Commonwealth will not manufacture the apparatus but will develop and license it for manufacturers. For further details, please mention PEE No. 154 in your request.

Roll Clamp for Fork Lift Truck

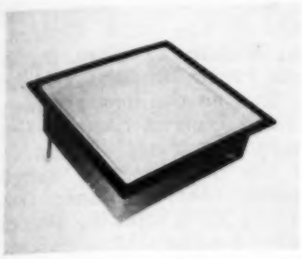
A roll clamp, manufactured by Towmotor Corporation for use on Towmotor Fork Lift Trucks, enables the operator to lift, transport and stack heavy rolls of paper and similar loads. The Upending Roll Clamp, shown attached to a Model LT-56

Towmotor Fork Lift Truck, is used to rotate loads 90 deg. from the horizontal to the vertical position, or vice versa. Curved shoes on the ends of the clamp arms are sand-blasted to provide a firm gripping surface. For further details, please mention PEE No. 159 in your request.

Art Stripping Table

Colwell Litho Products, Inc.'s new Colight Art Stripping Table has been designed for use by photographers, artists, and lithographers. The double glass design includes an air space for keeping the working surface cool. Special Italian opal glass provides soft, even lighting and reduces eye strain. The table top is made of clear plate glass with a 16 in. by 18 in. working surface. The adjustable legs make it possible to tilt the table for greater working ease. The legs

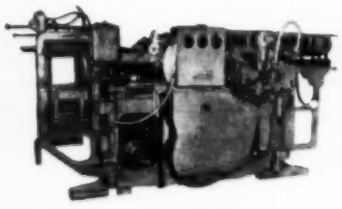
are provided with rubber feet to protect floor surfaces. The table back is louvered to insure proper ventila-



tion. Finished in blue-gray baked-on wrinkle enamel, the table is also available in a larger size with a 19 in. by 25 in. working area. For more information, please mention PEE No. 155 in your request.

Hot Spot Carbonizing Unit

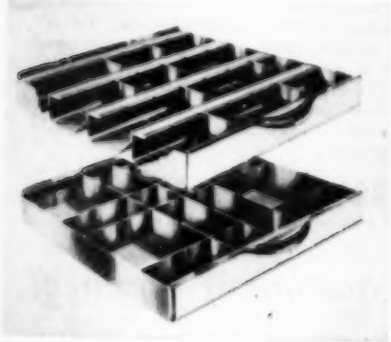
Doven Machine & Engineering Co., Inc., recently announced a Hot Spot Carbonizing Conversion Unit for a Miehle Horizontal Press. The Doven Hot Spot conversion installation enables owners of Miehle Horizontals to handle hot spot carbonizing and hot embossing special work. Multiple



carbon business forms, invoices, orders, sales tickets, statements and other hot spot forms can be produced without interfering with conventional letterpress operation. It is stated that Doven Carbonizer prints on hot spot carbon in any size of shape at approx. regular press speeds. The built-in conversion includes heat adjustments, control box, electrical work on the fountains, inker and rollers. For further details, please mention PEE No. 162 in your request.

Storage Cabinets

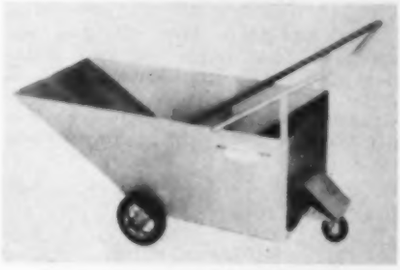
Little Gem Cabinets for small parts storage have been announced by Equipto. Type A Drawer is constructed with 28 adjustable compartments. Compartment surfaces are curved with an overhang to prevent jumbling of parts. The drawer is



also equipped with labelholders and drawer stops. Type B Drawer is constructed with 36 adjustable compartments and is supplied with a labelholder on front of drawer. Little Gem Cabinets can be used individually, in stacks, or in a variety of multi-drawer units. For further details, please mention PEE No. 150 in your request.

Materials Handling Cart

A materials handling cart for transporting small parts, chips, shavings, clippings, liquids and waste has been introduced by Coolant Equipment Corp. Overall height of the Model 47 cart is 20 in. The Model 47 cart has a short turning radius and a handle design which makes stooping unnecessary. Cart body is mounted on two 8 in. roller bearing wheels and one 4 in. swivel caster.



Either solid steel or rubber tired wheels are available. Built of 12 ga. steel, the Model 47 has a capacity of 7 cu. ft. and weighs 95 lbs. For

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further details, please mention PEE No. 152 in your request.

Dark Room Sinks

The Bar-Plate Mfg. Co. has announced development of two stainless steel sinks, the I style and the L style, for use in the photomechanical department. Both sinks are constructed of Type 316 stainless steel.

These sinks can be supplied with or without splash boards and duckboards. Each sink is equipped with standard drain and stand pipe for water level control. The entire sink is heliarc welded and finished in gray enamel. For further details, please mention PEE No. 178 in your request.

Mergenthaler Redesigned Spaceband

A spaceband has been designed for Teletypesetter composition by Mergenthaler Linotype Co. At the same time, Linotype announced that all its spacebands have a redesigned radius at the lower end of the wedge for settling of the band into the assembling elevator. The spaceband, No. J-6453, is said to be constructed with additional strength obtained by specifying a thicker and stronger wedge top which reduces the possibility of bending. The J-6453 is constructed with a min. 0.0369 in. range and a max. 0.1219 in. range. It is also claimed that regardless of the angle of the spaceband drop into the assembling elevator, the radius will guide it into position without catching on the matrix support ledge. For further details, please mention PEE No. 176 in your request.

5th District Meet Tops

The Fifth District Conference of the Intl. Assoc. of Printing House Craftsmen, Inc., held in Cleveland, June 1-2, was one of the largest on record. Total registration went to 306 persons. Judging from comments, the conference was interesting and well-handled.

The 1957 conference will be held at the Brown Hotel, Louisville, Ky., May 17-18. Newly elected officers of the Fifth District include: William T. Micou, jr., Micou Special Paper Products Co., Louisville, Ky., as the new president of the Fifth District Society; George Thompson, partner, Toledo Colortype Co., as the new secretary-treasurer; Marvin R. Lohr, Detroit, Mich., as Fifth District Representative; Arthur W. Ballantyne, Columbus, O., as First Section Deputy; Corwin Swift, Indianapolis, Ind., as Second Section Deputy; and Sidney Langford, Cleveland, O., as Third Section Deputy.

Utz Succeeds Father—It was recently announced that Fielding A. Utz, jr., has been elected president of Milwaukee Printers Roller Co. to succeed his father, the late Fielding A. Utz.

Linotype Supply Expands—Linotype Supply Co., Inc. moved into its recently purchased building at 8 Beach St., New York, N. Y. The announcement was made by Henry Kantor, president of the firm, who also announced expansion in the equipment field by addition to its line of Goodhale Guillotines and Goodhale Joggers, British imports.

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The method is implemented with standard printing plates on standard presses by letterpress, offset, gravure and silk screen with your present equipment.

Color By Overprinting consists of 268 pages, sizes 8½ in. by 11 in.; 44 pages of illustrations; 165 pages of color charts with keyed numbers of inks employed to secure colors from 11 basic colors and black. Substantially hard bound. The text is fully annotated for artists, printers, engravers, art directors and editors in the book, magazine, packaging and Graphic Arts fields generally.

Price, **$25.25** per copy postpaid.
(Please send remittance with order.)

Printing Equipment Engineer
1276 West Third St. Cleveland 13, Ohio

PATENTS

For The GRAPHIC ARTS

Covering patents issued April 3, 10, 17 and 24.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

SELF-POSITIONING PHOTOTYPOGRAPHICAL MATRIX

This invention combines letter disc, spacing cam, and character selecting mechanism into a single simple unit. Each disc may represent a different style or size of type. Any arrangement of characters can be made, permitting addition of characters or symbols to any font and translation in any language. Patent 2,742,830 by Robert W. Wirtz, assigned to Wirtz Company.

PHOTOTYPESETTING UNIT

Overstretching of film, vibration of type matrix and like difficulties are overcome in this self-contained unit which not only composes, but also transfers and delivers film ready for printing use. Manipulating controls are arranged on the unit for rapid operation and continuous inspection. Patent 2,742,831 by Robert W. Wirtz, assigned to Wirtz Company.

PHOTOCOMPOSITION CORRECTION AND MAKEUP DEVICE

The device is suitable for rephotographing previously composed matter on a new film and inserting entire corrected lines at points where errors appear. It is also suitable for performing some of the work of page makeup by the insertion of titles, folios, footnotes, etc. Patent 2,740,324 by John J. Cahill, Jr., assigned to Mergenthaler Linotype Co.

DEVICE FOR PATCHING TELETYPE CODE STRIPS

Broken or torn Teletypesetter code strips which are perforated by means of typewriter-like machines and then fed into mechanical operating units attached to line casting machines for newspaper, book and magazine work, may be readily mended or spliced by this device. Patent 2,740,461 by Joseph M. Siebern.

•

Platemaking:

COLOR SEPARATION APPARATUS

Color separation negatives for use in halftone printing processes are obtainable in this apparatus. The negatives need little or no hand correction in order to correctly reproduce the true colors of the copy or original to be reproduced. Patent 2,740,323 by Paul F. Borth, Joseph J. Peterka and Charles E. Wilson, jr., assigned to R. R. Donnelley & Sons Co.

APPARATUS FOR PROCESSING A CONCAVE WORK OBJECT

Printing plates of concave shape are shaved by this apparatus. No clamps are required to initially secure the plate, as the apparatus automatically clamps the plate under pressure concurrently with the rotary operation of the machine. Patent 2,740,331 by Joseph Schwartz and Amos Ackley, assigned to Westcott & Thomson, Inc.

PHOTOGRAPHIC STRIPPING TISSUE

This stripping tissue can be produced more economically than similar film using cellulose nitrate. It is useful in structures in which a light-sensitive image layer, after exposure and processing, is positioned against a glass surface and the temporary support is stripped from the plate, which is then useful for printing techniques. Patent 2,740,716 by Ivin R. Forman, assigned to The Haloid Company.

COLOR CORRECTION SYSTEMS

This electronic scanning system is useful on platemaking and employs a first cathode ray tube to scan the color separation positives, and a second exposing cathode ray tube which has its beam modulated by the corrected electrical signals. It is used as a light source for exposure of sensitized plates to provide color corrected negatives. Patent 2,740,828 by Harold E. Haynes, assigned to Radio Corporation of America.

COLOR CORRECTION SYSTEMS

This is an electronic scanning and exposing system for producing photographic plates. It provides an accurate, easily maintained yet simply constructed optical beam imaging device using a separate imaging lens for each one of the color separation positives. Patent 2,740,832 by Kenneth E. Andrews, assigned to Radio Corporation of America.

PRINTING PLATE MATERIAL

This is an improved rubber plate which has a printing surface capable of reproducing fine detail but yet is flexible and resilient. It employs a soft rubber backing and a rubber plastic facing. The plate exhibits good storage and shipping qualities and can be conveniently formed on existing platemaking equipment. Patent 2,741,297 by Stephen Vamvaketis, assigned to United States Rubber Co.

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Canadian Sales Agents ROSS WHITEHEAD & CO. LTD., Montreal, Canada

EXPOSED FILM RECEPTOR FOR PHOTOMECHANICAL CAMERAS

This device, which applies to photoengraving or halftone cameras, provides a receiving chamber to protect exposed film until it is processed again. It places the film rearward of its exposure position, and raises it to a convenient position for removal when the receptor is opened. Patent 2,741,962 by Andrew K. Anander, assigned to Powers Chemco, Inc.

PHOTOMECHANICAL CAMERAS

This camera provides for proper positioning of the cut-off film in the exposure area prior to exposure and it protects the film from exposure until it has been fully positioned. The interlock mechanism cannot be moved into exposure position for halftone or screen exposure until the supporting roller and opaque curtain have been retracted. Patent 2,741,963 by Andrew K. Anander, assigned to Powers Chemco, Inc.

STABILIZED DICHROMATED POLYVINYL ALCOHOL COATING MATERIAL

In making a lithographic printing base of metal, a stabilized light sensitizable coating consisting of an aqueous solution of polyvinyl alcohol, phenol, and a dichromate, is used. The coating has increased stability and shelf age. Patent 2,742,358 by Clarence A. Brown, assigned to Jones Graphic Products Co.

OPTICALLY SENSITIZED PRESCREENED PHOTOGRAPHIC MATERIAL

This invention provides a film or plate on which either halftone or non-halftone images can be made at will. It has a sensitivity to longer wave length which is greater at center than at corners of the pattern, with uniform sensitivity to blue light throughout, and is useful for intaglio, litho and other printing processes. Patent 2,742,833 by Ralph M. Evans, Robert E. Stauffer and Henry C. Yutzy, assigned to Eastman Kodak Co.

PATENT SEARCHES

For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write

INVENTION, INC.

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PLANOGRAPHIC PRINTING PLATE AND TREATMENT

Lithographic printing plates of paper are treated with an aqueous solution of a water-soluble permanganate so that it can withstand or resist being soiled by greasy ink. This treatment also increases the utility of the plate to retain lithographic images applied to the dry surface. Patent 2,741,981 by Frederick H. Frost, assigned to S. D. Warren Co.

•

Printing Presses:

APRON BLANKET FOR MULTICOLOR PRINTING PRESSES

The apron is in the form of a light weight metal sleeve or tube to fit between first and second printing cylinders and support a printed sheet in spaced relation during its transfer from the first to the second printing cylinder. The sleeve is perforated. Patent 2,740,355 by Harry E. Wimpfheimer.

INKING MECHANISM FOR INTAGLIO PRINTING MACHINES

Primary object here is to close off the inking mechanism without interfering with the oscillation of the doctor blade or its adjustment. It is adaptable to cylinders of variable size and provides a complete seal for the inking mechanism. Patent 2,741,175 by Paul Heimlicher, assigned to Maschinenfabrik Winkler, Fallert & Co., A. G.

TENSION CONTROL MEANS IN ROTARY PRESSES FOR PRINTING AND BLANKING

This continuous rotary paper-board box printing press and blanker has responsive idle rolls which account for change in web tension. It prevents pulsations from the blanking section and maintains accurate registry. The idle roll response is derived from resilient couplings between the pull roll and power mechanism. Patent 2,741,176 by Robert F. Hollis, assigned to Alton Box Board Co.

WEB DRIER

U-shaped oven sections mounted on rails are built into a printing press in such a manner that freshly printed webs will pass through the oven and dry as the web moves along its path through the press. Patent 2,742,274 by Torsten F. A. Edvar, assigned to Selas Corp. of America.

•

Feeding, Folding, Delivery:

BOX-BLANK FEEDING MACHINE

Sheets or box-blanks are retained in a stack in a hopper and as the stack is intermittently and automatically lowered, a sheet is delivered from the bottom of stack at each stroke. A "jogger" is associated with lower portion of the stack to keep it in good alignment. Patent

SHEET FEEDING MACHINES

The feeding of individual sheets into a printing machine is hereby facilitated by provision of a smoother extending across the layboard to keep the front portion of the sheet flat for engagement by transferment grippers. Patent 2,741,479 by Headley Townsend Backhouse and William James Pirie.
2,740,629 by George H. Harred, assigned to Bostitch, Incorporated.

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Burgess mats shrink less lengthwise for a given width shrinkage. Why ask for trouble with advertising lineage. Help the advertising department—use Burgess Mats.

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Graphic Arts Meetings

(With Organization Name and Correspondence Officer)

American Photoengravers Assoc. —1956 Conv., Hotel Statler, Detroit, Mich., Oct. 8-10. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf.—1957 Conf., Morrison Hotel, Chicago, June 10-12. Mgr. Richard E. Lewis, ANPA Mechanical Dept., 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1956 Conv., The Greenbrier, White Sulphur Springs, W. Va., Oct. 11-13. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. —1957 Conf., Brown Hotel, Louisville, Ky., May 18-19. Secy.-Treas. George Thompson, Toledo Colortype Co., 1719 Jefferson Ave., Toledo, O.

Graphic Arts Trade Assoc. Executives 1957 Conf., Biltmore Hotel, Los Angeles, Oct. 26-27. Secy.-Treas. W. Floyd Maxwell, LNA, 420 Lexington Ave., New York 17.

Gravure Technical Assoc.—1957 Conf., Drake Hotel, Chicago, Feb. 6-8. Secy. Len S. Pinover, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf.—1957 Conf., Statler Hotel, Cleveland, O., Jan. 13-15. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press*.

Illinois Newspaper Mechanical Conf. —1956 Conf., Wolford Hotel, Danville, Ill. Sept. 29-30. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assoc. Electrotypers & Stereotypers—1956 Conv., Chateau Lake Louise, Lake Louise, Alberta, Can., Sept. 5-8, Exec. Secy. A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. —1956 Conf., Santa Barbara College, Univ. of California, Santa Barbara, Calif., Aug. 5-10. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Secy. Louis A. Croplis, American Type Founders, 555 Broadway, New York 12, N. Y.

Intl. Typographic Composition Assoc.—1956 Conf., Royal York Hotel, Toronto (Ont.) Can., Oct. 10-13. Exec. Secy. Frank M. Sherman, 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf.—1957 Conf., Hotel Hanford, Mason City, Ia., May 4-6. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Kansas-Missouri Newspaper Mechanical Conf.—1956 Conf., Town House Hotel, Kansas City, Kans., Sept. 8 and 9. Kansas. Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.—1957 Conf., The Greenbrier, White Sulphur Springs, W. Va., Apr. 1-3. Exec. Dir. W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1957 Conf., Sheraton Hotel, Philadelphia, Pa., March 21-23. Conf. Dir. Theodore A. Serrill, PNPA General Mgr., 2717 N. Front St., Harrisburg, Pa.

National Assoc. of Litho Clubs—1957 Conv., Palmer House Hotel, Chicago. May 3-4. Exec. Secy. Eugene Hanson, 4440 Bessie St., St. Louis 15, Mo.

National Assoc. of Photo-Lithographers—1956 Conv., Hotel Commodore, New York, N. Y., Sept. 19-24. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Paper Trade Assoc.—1956 Meeting, Conrad Hilton Hotel, Chicago, Ill., Sept. 17-19. Secy. J. H. Longergan, 220 E. 42 St., New York.

National Printing Equipment Assoc., Inc.—1956 Meeting, Statler Hotel, Los Angeles, Calif., Oct. 20-Nov. 1.

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The Wesel 25 is a precision piece of equipment with built-in simplicity. It produces superb negatives! All camera operations . . . film loading, automatic timing, automatic sizing and focusing are done from one position at the rear of the camera. Designed for line and Autoscreen offset and photoscreen negatives. Size of back: 25" x 25". Tilting copy holder is 30" x 40". Entire unit is mounted on 3-point vibration-absorbing mounts. Investigate the savings that ownership of a Wesel 25 affords you.

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Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—1956 Conf., Conrad Hilton Hotel, Chicago, Oct. 24-25. Staff Rep. N. T. Kinney, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc.—Secy. Lewis R. Green, Westerly (R. I.) *Sun.*

New England Newspaper Mechanical Conf.—1956 Conf., Statler Hotel, Boston, Mass., Oct. 20-21. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Schenectady (N. Y.) *Union-Star.*

Northwest Mechanical Conf.—1957 Conf., Hotel St. Paul, St. Paul, Minn., Feb. 16-18. Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1956 Conf., Biltmore Hotel, Los Angeles, Calif., Sept. 14-16. Secy. Fred Moyer, Sr., 6630 Mayflower Ave., Bell, Calif.

Packaging Institute Assoc.—1956 Conv., Statler Hotel, Cleveland, O., Sept. 10-12. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1956 Conf., Statler Hotel, Los Angeles, Calif., Oct. 30-Nov. 2. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1957 Meeting, Ben Franklin Hotel, Philadelphia, May 15-17. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave., N. W., Washington 15, D. C.

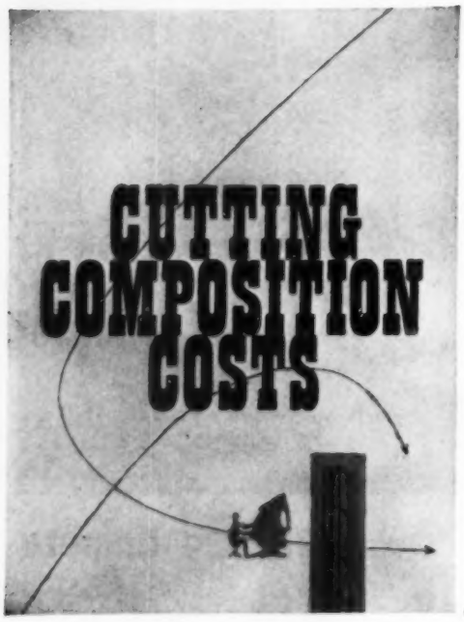
Screen Process Printing Assoc., Intl.—1956 Conv., Sherman Hotel, Chicago, Oct. 19-21. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1956 Conf., The Dinkler Plaza, Atlanta, Ga., Aug. 19-21. Secy. John A. Hogg, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1957 Conf., Hotel Galvez, Galveston, Tex., March 10-12. Secy. Walter Johnson, jr., P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts—1957 Conf., Ben Franklin Hotel, Philadelphia, May 13-15. Secy.-Treas. Phillip E. Tobias, 140 N. 6th St., Philadelphia 6, Pa.



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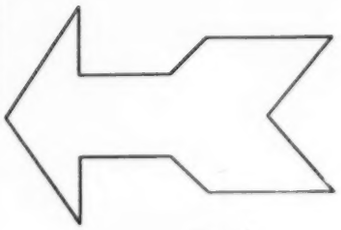

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The new 12 page illustrated booklet "Cutting Composition Costs" contains the answer to one of the most troublesome of composing room problems—the reduction of time, waste and spoilage incidental to the hand sawing of slugs. It explains in detail the many advantages of automatic slug sawing—with a Mohr Saw attached directly to the linecasting machine.

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Mr. Composing Room Executive

Let this booklet tell you how efficiency can be increased and costs can be cut by automatic slug sawing with the Mohr Saw. Send today for your copy of "Cutting Composition Costs."

L.A. Printers Plan For PIA Convention

Plans for the 70th annual convention of Printing Industry of America, Inc., to be held Oct. 30 to Nov. 2 at the Statler Hotel in Los Angeles, began to take shape recently with the announcement of the host Printing Industries Association, Inc., of Los Angeles, convention committee. Headed by George Rich III, general chairman, the commitee includes Phil Ellsworth; Henry Friedman; J. W. Gordon; O. T. Hamilton; Sid James, local president; Irl Korson, local vice president; Peter S. Fry, immediate past president; Edward Male; Ralph Shepherd, A. R. Rowbotham; and Henry Henneberg, Los Angeles local manager.

At the recent meeting of the committee, machinery was set in motion for production and distribution of promotional materials and plans for the ladies' activities were scheduled. Ladies will visit Knott's Berry Farm, Disneyland, a fashion show at the Beverly Hilton Hotel, and the *Queen For A Day* show at the famed Moulin Rouge. Ladies committee includes Mrs. Lois Korsen; Mrs. Onis Rice; Mrs. Lena Fry; Mrs. Grace Male; Mrs. Martha Henneberg; Mrs. Paul Walker; and Mrs Ben Johnston.

The convention, first in Los Angeles in seven years, will afford printers the opportunity of hearing foremost national Graphic Arts leaders discuss recent developments in their respective specialities.

NEWS ITEMS

The Chicago Lithographic Institute held its annual graduation exercises June 9. Fourteen classes, totaling 127 students received their satisfactory certificates of completion in all branches of the lithographic industry at that time. Commencement exercises were held at the Institute's new location at 1611 W. Adams St., Chicago.

McKENNA

John H. McKenna was appointed vice president of Roberts Numbering Machine Co. at a recent board of directors meeting, it was announced by J. F. O'Brien, president of the Heller Corporation, parent company. McKenna was formerly with Clifton Conduit Co. and Pierce Laboratory, Inc.

Interchemical Vice President—Claud Brown has been elected a vice president of Interchemical Corporation and will continue as treasurer. Brown joined Interchemical in 1930 as a member of the comptroller's office and was elected comptroller of the Printing Ink Div. in 1938 and a Division vice president in 1948.

SHIPPEY

Shippey Heads Ink Plant—Coincident with the opening of its ink plant in Atlanta, Ga., L. W. Hraback, president of Sleight and Hellmuth, Inc., announced appointment of W. Wright Shippey as manager of the branch. Shippey is a charter member of the Atlanta Club of Printing House Craftsmen and served on its Board of Governors for 15 yrs.

Educational Council Announcements—New members of the Education Council of the Graphic Arts Industry, Inc. were announced as a result of the membership campaign currently being conducted by Harry A. Porter, director of membership. Members are as follows: Colorcraft Lithoplate Co., Long Island City, N. Y.; Brett Litho Co., Long Island City, N. Y.; Graphic Arts Assoc. of Illinois, Inc., Chicago; Graphic Arts Assoc. of Connecticut, Hartford, Conn.; Printing Industries of Philadelphia, Inc., Philadelphia; Vincent B. Fuller Typesetting, Inc., Philadelphia; International Typographic Composition Assoc., Philadelphia; The Stein Printing Co., Atlanta, Ga.; John H. Harland Co., Atlanta, Ga.; McCormick-Armstrong Co., Wichita, Kan.; Byron S. Adams Co., Washington, D. C.; Kurt H. Volk, Inc., Bridgeport, Conn.; Technical Charts, Inc., Buffalo, N. Y. Also announced was the Council's acceptance of the Printing Industry of America offer to move into its new building. The move was made around June 1 to a second floor suite in the building located at 5728 Connecticut Ave., Northwest, Washington 15, D. C.

Hendrickson Nominated for Governor—At the Fourth District Conference of the International Assoc. of Printing House Craftsmen held at Haddon Hall Hotel in Atlantic City, N. J., May 11-13, Paul Hendrickson was nominated for election to the International Board. Under the new governing rules of the association, the Fourth District is one of nine that will have no representative in the official family at the convention in Los Angeles and therefore is eligible to place a candidate in nomination for three vacancies on the board. The Fourth District is composed of local clubs in Baltimore (Md.) and Wilkes-Barre—Scranton (Pa.) area; Harrisburg and Lehigh Valley, (Pa.) area; Richmond, Roanoke—Norfolk (Va.) area; Philadelphia and York (Pa.) area.

Hendrickson who was unanimously the choice of the delegates has been a member of the Craftsmen's Association for 25 years, being a charter member of the York Club.

Experience and keen interest is the platform of his candidacy. He has served as a member of the board of governors of his local club three

The Heavy Duty Flat Bronzing and Dusting Machine

DREISSIG KOMBI 10 V

- The KOMBI 10 V combines one Bronzing Machine and one Dusting Machine on a common base. This combined machine is thus extremely space-saving, particularly for those large scale printing shops where the work is continuously going on in several shifts and where, according to experiences, two bronzers used to be connected, one behind the other, to obtain higher production rates.
- In the KOMBI 10 V type construction a space provided between the two machines prevents the bronze powder in suspension in the Bronzer from being carried over to the Dusting Machine. Ten burnishers, ten dusting bands and four dusting-off rollers account for intensive burnishing and really dependable front and back dusting. A special bronze application device, system "Muller," for which patents are pending, saves about 30 to 40 percent of bronze powder, eliminates all danger of transfer of printed parts to other sheets, and avoids whirling up of dust.
- The operator may lower or raise all burnishes evenly and at one time. The Dreissig Bronzer can take a sheet size 52" x 76".

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times. He has been a vice president and is a past president of the York Club. His experience on the International level includes three terms as district representative for the Fourth District.

His attendance at International Conventions started in 1931.

Hendrickson, is executive vice president and general manager of Pennsylvania Electrotype Co., York, Pa.

Stoker Appointed Sales Rep.—The Geo. H. Morrill Co., Div. of Sun Chemical Corp., has appointed Richard W. Stoker as sales representative. With headquarter in Charlotte, N. C., he will cover the Southeastern territory. Stoker was associated with the Charlotte (*N. C.*) *News* before joining Morrill.

ISSERMAN

Elects Vice President—Philip A. Isserman has been elected vice president of the Mendle Printing Co. of St. Louis, Mo., it was announced by Maurice E. Mendle, president. Isserman, who has been with the company since 1949, in addition to his duties as company coordinator, will serve as direct assistant to the president.

Schaefer Buys Bryan-Brandenburg—The George C. Schaefer Engraving Co. has purchased The Byran-Brandenburg Co. to form a new firm, which will be known as Schaefer-Shepherd, Inc. The new company will offer photoengraving, electrotyping, typographic, mat making, art and rotogravure engraving services. Principals of the new organization are George C. Schaefer, jr., president, and Ralph S. Shepherd. Address is 232 E. 4th St., Los Angeles 13, Calif., and the phone number is MUtual 7136.

You can purchase this new MORRISON SAW TRIMMER in 90 days with these time-savings alone

Your composing room probably costs you about $6.00 per hour per man. Breaking this down to minutes means a cost of 10¢ per minute per man in labor alone.

So, if one man loses one minute an hour waiting to use a saw trimmer, or walking too far to use it, or correcting mistakes from a saw that is inaccurate, this means 8 minutes lost in an 8 hour day, or 80¢ lost per man in labor costs. If you have 10 compositors, you may lose up to $8.00 a day. And this will buy a new Morrison Saw Trimmer in about 90 days!

Translating this to savings —

Saved per man per day	80¢
For 10 Compositors	$8.00
Savings in 90 days	$720.00
Average cost of Morrison Saw Trimmer	$740.00

PAID BY SAVINGS

Turn Minute-Loosers to Dollar Profits — with new MORRISON SAW TRIMMERS. They're available in styles and sizes for every plant. Write for catalog.

MORRISON MODEL 3-A

THE *Morrison* COMPANY

Precision Machines for The Graphic Arts Industry

125 W. Melvina Street, Milwaukee 12, Wis.

Miehle Sales, Earnings Up—Miehle Printing Press and Mfg. Co. and its subsidiary, Dexter Folder Co., reported to shareowners combined sales for the first six months of the current fiscal year of $20,694,000, an increase of 20% over sales of $17,257,000 in the comparable 1955 period. Combined net earnings for the six months were $1,514,000, an increase of 30% over the $1,162,000 in the comparable period a year ago. The report is for the Miehle six month period ending April 30, and for the Dexter six month period ending March 31. Earnings are equivalent of $1.86 per share on the 813,130 shares outstanding at April 30. The comparable equivalent for a year ago would be $1.43. J. E. Eddy, Miehle president, commented to shareowners that he and his associates in the Miehle and Dexter managements anticipate continued good sales volume.

BURKE

Huber Sales Rep.—Robert C. Burke was appointed sales representative for the eastern district, J. M. Huber Corporation's Ink Division, it was announced by Louis A. Lara, general sales manager for the Division. Burke will contact New York, New Jersey and Western Pennsylvania, in addition to Metropolitan New York, N. Y. Burke joined the Huber organization in 1950.

Dawley Retires; Schafer Promoted—James R. Dawley, manager of the Penton Press Div., Penton Publishing Co., Cleveland, has retired after 40 years of service with the company and 52 years of active connection with the printing industry. He joined the company on June 1916. Since development of a cost system by Dawley, the Press operations have shown a profit for each of the 39 years. Through his recommendation, many new machines have been purchased to improve quality of the publications and lighten the burden of Press employees. He has inaugurated many improvements in printing methods. Always believing that no plant is better than the people who operate it, he has endeavored to build an organization of contented employees by being fair in dealing with all complaints and maintaining top wages and working conditions. Dawley has served as president, Cleveland Graphic Arts Club; vice president and director, Master Printers Assoc. of Cleveland; director, United Typothetae of America; and director, 7th District, Natl. Printers Assoc. for Ohio, Ind., Ky. and West Va. Penton

Reduce Loading Time 95%

NOLAN REMELTER and MELTEVATOR

Load 600 lbs. of metal in 30 seconds
Push Button Loading . . . no hand ladling

IN 15 MINUTES . . .

Our man can show you how Nolan Remelter cuts your metal and metal handling costs, eliminates space-eating scrap metal bin. Saves space. Melts a full pot in less than two hours. Melts additional loads in only one hour. It's worth your time to cut your costs.

Write, wire or phone collect and we'll send the man with the Nolan Plan. No cost — no obligation. Nolan will custom design installations to meet your requirements.

KEEP ROLLIN' WITH NOLAN!

Press prints a number of leading industrial and trade publications. Carl Schafer, assistant to Dawley, has been named manager of Penton Press Div. of the Penton Publishing Co.

Blattenberger Presented with Membership—At its May 22 meeting, the Washington (D. C.) Litho Club presented the Honorable Raymond Blattenberger, public printer of the United States, with an honorary membership. Shown at right is Jack O. Blades, former president of the National Assoc. of Litho Clubs, making presentation of a case with membership card to Blattenberger. Also presented was a framed certificate. Another guest at the meeting was the Honorable V. C. Blight, deputy government printer of the Commonwealth of Australia.

Photon Vice President—W. W. Garth, jr., president of Photon, Incorporated, recently announced the appointment of William Baumrucker, jr., as vice president. Baumrucker was formerly business manager of the Boston Herald Traveler Corp. After graduation from the Massachusetts Institute of Technology, Baumrucker was associated with the New York (N. Y.) *Daily News* and the Washington (D. C.) *Times Herald*. Baumrucker was chairman of the ANPA Mechanical Research Committee for seven years and has been a member of the executive committee of the Research & Engineering Council and a member of the advisory committee of the Graphic Arts Research Foundation, Inc.

BAUMRUCKER

Magill-Weinsheimer Celebrates—Magill-Weinsheimer Co., Chicago lithographer, printer and specialist in creative advertising, is celebrating its 50th year in business. Magill-Weinsheimer was founded in 1906 by Franklin P. Magill and Alfred J. Weinsheimer, now chairman of the board. The plant is now housed in a modern $1¼ million, one-story plant in suburban Lincolnwood, Ill., with over 500 employees. The firm maintains branch offices from coast to coast and a color depositing division in Cleveland.

Sun Chemical Progress Report—Following several days of inspection of facilities operated by General Printing Ink of Canada Ltd. and A. C. Horn Co. Ltd., both Canadian subsidiaries of Sun Chemical Corp., Ralph C. Persons, president of Sun Chemical, got together with management and sales personnel from both organizations. A favorable progress report won smiling approval from Persons (center), and C. A. Brattstrom (left), vice president of Sun Chemical. Looking on is A. E. Loveland, general manager of G.P.I.

Lawson President Visits Europe—David W. Schulkind, president of E. P. Lawson Co., left New York, N. Y., May 28, marking his tenth business trip abroad in the past five years. Since 1951, Schulkind has been making trips to Europe, visiting

Political views are based on personal opinions and are many and varied. But when it comes to dry mats everyone who has used them agrees . . . for the best — USE BEVERIDGE!

New Products Division

The BEVERIDGE PAPER CO.

Indianapolis 4, Indiana

Graphic Arts trade centers to get information on trends in equipment and production techniques. On his present trip he will visit with manufacturers, printing plants and binderies in Paris, Zurich, Vienna, Hamburg, Hannover and Berlin. While in Paris, Schulkind will attend the International Show of Paper and Graphics Techniques.

DOTY

Seybold Product Manager—Joseph C. Doty has been named Seybold product manager for the Harris-Seybold Co., according to a recent announcement by Ren R. Perry, vice president of sales. Doty joined Harris-Seybold in 1945 as a sales representative, and in 1951 became North East district manager. Prior to joining Harris-Seybold he was associated with Howard Allied Paper Mills' Maxwell mill and Howard's Aetna mill where he was general manager. Doty's present headquarters will be in Harris-Seybold's Dayton, O., plant.

Two Cutler-Hammer Appointments—Appointment of W. F. Lent as vice

LENT MILLERMASTER

president in charge of manufacturing and R. A. Millermaster as vice president in charge of development was announced by Philip Ryan, president of Cutler-Hammer, Inc. Both Lent and Millermaster hold electrical engineering degrees from the University of Wisconsin. Lent was formerly works manager for Cutler-Hammer and Millermaster was manager of development.

Midwest Conference—The Midwest Printing Production Conference held in Kansas City, Mo., Saturday, May 12, was attended by 128 people. The conference was sponsored by the Graphic Arts Association of Kansas City. Some of the speakers were: Frank O. White, association president; Donald E. Sommer of Chicago, technical director of Printing Industry of America; John S. Leiter of Kansas City, Mo., salesman for the Vile-Goller Printing Co.; Hy Vile, partner in the Vile-Goller Printing Co.; C. A. Severin, jr., Topeka, Kan., manager, Hall Lithographing Co.. John Smith of Kansas City, Mo., controller for the Continental Color Press, and William J. Smith of Kansas City, Mo., vice president of Smith-Grieves Co. Other speakers were O. F. Ash, jr. of St. Louis, Mo., partner, Conner, Ash & Co.; Thomas Roth of Kansas City, Mo., superintendent, Chas. E. Brown Printing Co.; Benton Thomas of Kansas City, Mo., vice president and general manager, LaRue Printing Co.; A. G. Sturdivant of Kansas City, Mo., manager, Industrial Division, Bublitz Machinery Co., and William F. Ashcraft of Kansas City, Mo., president, Ashcraft, Incorporated.

Newspaper Design Seminar — Executives from principal newspapers of the South attended the Seminar On Newspaper Design sponsored by Mergenthaler Linotype Co. in Atlanta, Ga., May 7-11. The Seminar was conducted by Gilbert P. Farrar, authority on newspaper styling, to encourage typographical excellence in newspaper appearance and legibility.

Shown standing (left to right) are: John F. McGee, assistant business manager, Charleston (S.C.) *Evening Post-News & Courier;* Kenneth L. Dixon, managing editor, American Press, Lake Charles, La.; Ray Shokley, Sunday editor, Atlanta (Ga.) *Journal;* Benjamin Knight, news editor, Florence (Ala.) *Times;* Bert Struby, executive editor, Macon (Ga.) *Telegraph* and *News;* Tom McRae, assistant managing editor, Atlanta (Ga.) *Constitution.*

Seated (left to right) are: James M. Ward, editor, Jackson (Miss.) *Daily News;* Gilbert P. Farrar, conductor of the seminar; Elizabeth Cornelius, woman's editor, Jacksonville (Fla.) *Times-Union;* E. A. Shelnutt, managing editor, Montgomery (Ala.) *Journal;* (not shown) James G. Bellows, news editor, Atlanta (Ga.) *Journal.*

LEWIS

David W. Lewis recently transfered his activities from research engineering, ANPA Research Institute, to Chas. T. Main, Inc. In his work at Chas. T. Main, Inc. he will be interested in newspaper printing plant problems and commercial printing work. Lewis graduated from Lafayette College with a Bachelor of Science in Mechanical Engineering. He was with the ANPA Research Institute in charge of mechanical operations in the laboratory, which included supervision of the machine shop, all press equipment and mechanical developments. He had also been working on dry offset studies for use in newspaper supplement production. Lewis is a member of American Society of Mechanical Engineers and a member of TAGA.

Closes Plant for Vacations—Intertype Corporation will observe a plant and office vacation period, July 28 to August 12, inclusive. While no regular shipments will be made during the period, emergencies will be taken care of.

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Speeds Rubber
Plate Production

Top Accuracy Plates
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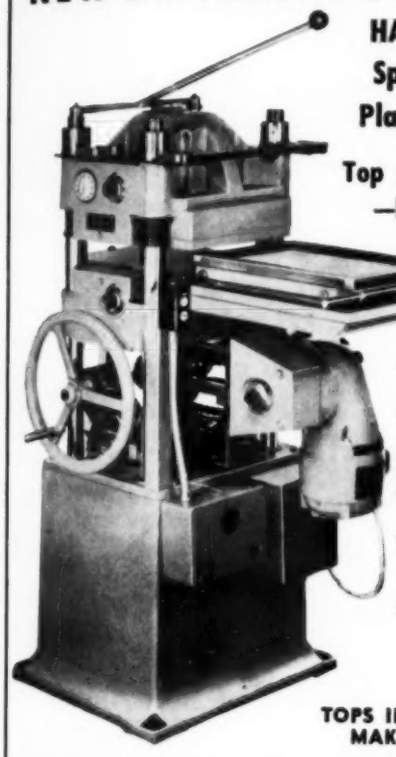

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Business men notice it

Glancing over your paper at their clubs, they remark, "There is a paper that is surely coming up."

"Why?" somebody questions. "Same editor, same staff, same general policies." . . . But there is one significant change—a new point of view at the production end, a new demand that the paper's appearance be more than merely "all right." . . Certified Mats often bear a part in a program of improved production.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 555 Fifth Avenue, Dept. M, New York 17, N. Y.

Machinists

(Continued from Page 42)

an average, the mouthpiece temperature should be in the neighborhood of 400 deg. F. A more or less superficial test of the mouthpiece temperature can be obtained by drawing the corner of a 2 pt. slug or rule slowly across the mouthpiece face.

One of the machinists present in the audience stated that on future orders of Linotype machines the Comet pot would be applied to a new machine irrespective of model.

There was considerable discussion about the use of gadgets on old and new style linecomposing machines. It seems that on most of the older installations, the machinist in the plant worked out his own safety gadgets for informing the operator when keyboard operating unit and/or matrix assembly don't work properly. It seemed to be the consensus of opinion that all batteries of machines should be equipped with the Shaffstall electric eye device mounted at the right lower side of the magazine. This device stops the keyboard operating unit when the matrix fails to fall from the magazine, especially those handled beyond the first two rows of lower case in the magazine. The use of this device eliminates the need for resetting considerable type matter in case of failure of a matrix or matrices in any of the channels to drop into the assembler.

W. D. Hargraves, mechanical superintendent of the Lawton (Okla.) *Constitution* and *Morning Press* said on some of the earlier equipments devices had been developed in his plant for stopping a machine when the distributor stopped, the keyboard operating unit runs out of tape, matrix squabble in the assembler, and so forth. He said: "The monitor would go nuts without these gadgets."

Frank D. Foster, engineering department, Intertype Corporation, in response to a question as to how to associate production and editorial departments more closely in the case of TTS operated equipment, stated that some plants may have to adjust the other departments to work in connection efficiently with the composing room. For instance, he said, it could be arranged to have the proofreader call up right away in case any certain letter or letters are not dropping in the galley as soon as possible after a proof has been received. He also stressed that routine machine maintenance to insure matrix response is a prime essential in TTS operation. The machines must be kept in good condition. Modern Intertype machines have safety devices to avoid operation of the machine when something goes wrong mechanically. He said that Intertype Corporation could supply a number of devices for the older type of TTS operated machines.

William F. Mulroy of Merganthaler Linotype Co. said that on modern Linotypes certain safety devices are standard equipment. In answer to a question he said that Mergenthaler will supply safety devices for old machines, such as models 5, 8 and 14, which presently are outstanding in the field. Someone wanted to know how soon these devices would be available. Mulroy stated that they would be available within six months. He concluded his remarks by stating that so-called gadgets will no longer be considered gadgets—they will be an integral part of the machine on new equipment.

W. D. Hargraves, mechanical superintendent, Lawton (Okla.) *Constitution* and *Morning Press*, explained that an inter-communicating phone system is used in the entire plant. As soon as a proofreader detects, for instance, that the lower case "t" matrices are not dropping in No. 8 machine the composing room is immediately notified. In this way, loss of a galley of type may be avoided.

Stereo Equipment

(Continued from Page 33)

one side. The key plate is positioned on the cylinder against the pre-set finger stops and the cylinder is centered with the indicators. An impression of this plate is taken against a transparent register sheet and the key plate is notched for position. Other color plates are brought into register with the impression on the transparent sheet and notched.

A view of the Goss Pneumatic Pump, Plate Perfector, and Tension Miller is shown in Fig. 2.

PRODUCTION PRODUCTS FOR THE GRAPHIC ARTS

Chesley F. Carlson Company

CARLSON HI-LO NEWSPAPER CHASE CARLSON SHELL PLATE FINISHER

Sold by the finest representatives in the newspaper field.

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Questions and Answers

Many of the questions during the discussion period were directed to Charles Fritschi, manager, Stereotype Machinery Department, R. Hoe & Co., Inc., in regard to the M-A-N equipment. Fritschi said, in reply to a question by Edgar S. Leigh, production manager, The Ottawa (Ontario, Can.) *Citizen,* that the best metal temperature range for the M-A-N Plate Casting Equipment for longer runs was between 525 deg. and 540 deg. F. since the metal was never exposed to the air. As a general rule, Fritschi continued, the best plates are cast at the lowest possible temperatures.

Jack E. Innis, stereotype foreman, Indianapolis (Ind.) *Star-News,* asked what the delivery dates were on each of the pieces of equipment described during the session. The Wood equipment reported to be available in approx. 6-7 months; Goss Pneumatic Pump in approx. 1 month and the Plate Perfector and Tension Miller in 6-7 months; the M-A-N semi-automatic equipment is reportedly available in approx. 6 months, the automatic equipment in approx. 12 months. Fritschi said the first M-A-N Plate Casting Equipment installation would be made in a plant in Tenafly, N. J., sometime this fall.

Harry Eybers, production manager, Washington (D.C.) *Post & Times Herald,* asked the panel as a group why the advertising of plate casting machinery manufacturers contained statements such as: "This machine will keep accuracy of cast plates so well that you can now throw away your cards." Said Eybers: "This sort of talk hurts everyone concerned because such equipment is not yet, to my knowledge, available." Each of the machinery manufacturer representatives present agreed that such equipment was the goal of all, but that as yet it was still just a goal.

Improved Stereo Mats

A progress report on Mat Pak for newspapers was given to the stereotyping session by Frank J. Stanczak, ANPA Research Institute, Easton, Pa. Stanczak reviewed briefly the requirements which Mat Pak was designed to meet: (1.) It must adhere to mat during molding, drying, and forming operations; (2.) It must allow moisture to escape from the mat; (3.) It must shrink along with the stereotype mat; (4.) It must improve, or, at least be as good as, reproduction quality of standard mats, and (5.) It must allow multiple casts to be made. While there have been some difficulties in the past, it is now believed that the production of Mat Pak is well under control. The great need now is to properly evaluate its worth.

"Recently I witnessed the operation of two newspapers," Stanczak reported, "which ran plates with a maximum of 0.023 in. space depth on a packless mat other than Mat Pak. One newspaper with new presses printed all 68 pages of that day's run without a smudge. Another newspaper with a press which had been installed for nearly 30 years did not do as good a job. However, there was some question about the accuracy of their forms and mat molding techniques which might have improved their printing. Smudging occurred on about 25% of their pages. They felt, however, there was sufficient value in a packless mat that they are continuing its use."

An evaluation of Mat Pak will necessarily have to be made for your own plant conditions Stanczak said. Some potential users have told ANPA Research Institute: "If it improves our quality of printing, it's worth the price." "If it saves us 2 min. on the starter page, we like it." "We're interested in a packless mat because we're short of stereotypers and can't seem to get any. If a packless mat will allow us to put forth more production with the same manpower, it will be worth the price." A user of Mat Pak has said: "In our case, we mold about 85% of the mats for our first edition between 10 a.m. and 11:15 a.m. Normally this requires about six stereotypers. These men are taken from their work in other parts of the department, necessitating a delay in supplying material to the ad department. Using Mat Pak, two men will handle the entire output of the mat roller."

Stanczak concluded with this remark to the assembled newspaper executives: "The important factor, however, is that you try the various packless mats now available. Evaluate them for your plant operation, and make decisions on their use yourself. You may be pleasantly surprised what you can do."

Dimensionally Stable Mat

Robert Travis, Color Production Service, gave a progress report on another stereo mat development—the

THIS IS A HANTSCHO ROLL FED LITHO PRESS

THAT CUTS YOUR PRODUCTION TIME & COSTS!

MAKE EXTRA PROFITS

. . . and meet your competition price-wise!

FAST! Up to 20,000 I.P.H.! Designed in multiple as well as perfecting units for exceptionally high speeds and volume production.

ECONOMICAL! In addition to the huge savings because of production speeds, your paper in rolls costs less than paper in sheets!

VERSATILE! Hantscho presses can be made in many combinations and sizes to print a great variety of items. Designed for multiple units—with folders, sheeters, rewinders or other special equipment, these high speed presses are in use throughout the U. S., producing magazines, newspapers, color work, catalogs, business forms, playing cards, calendars and many other specialties.

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FOR YOU CAN ETCH TWICE AS MANY PLATES IN THE SAME AMOUNT OF TIME!

Powderless etching on Bi-metal plates*

with the Etchmaster, Zinkote Etchant, and Zinkote Engraving Plates is a simple ONE-BITE operation. Combination line and halftone areas, in one bite, is made possible on one plate and with one bath.

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ALL OVER THE WORLD

The specialist who has devoted a life-time to quality reproduction of newspapers is the first to appreciate the values of Wood Dry Mats.

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ALWAYS UNIFORM

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dimensionally stable glass fiber mat. While the mat is not yet ready to be put on the market, it is getting close to that, Travis said. So far the developers have been able to make a mat that is stable after it has once been scorched. In this stable condition, one set of plates can be cast today and another eight weeks from now with precisely the same results. This mat lends best to molding with a flat back and with a very hard combination. Routing has not been eliminated through the use of this mat, but the work has been held in most cases to rough routing. The mat now releases very well, said Travis, except when used in hand casting boxes. And this latter problem is being worked on.

Preparing Color Mats

D. B. Lytle, Lake Shore Electrotype Division, then presented a fine color film on the subject of *Preparation of R.o.p. Color Mats* as it is accomplished at the Lake Shore Electrotype plant in Chicago.

Questions and Answers

In the discussion period the newspaper executives gave what evaluations they had been able to make on the various new mats being developed. John W. Park, research director, Chicago (Ill.) *Tribune*, said that the molding time was important in an operation the size of the *Tribune*. With the presently used materials, that paper can get good four-color mats by leaving them in the molder for 25 to 30 min.; with the glass mats described by Robert Travis it was necessary to leave the mats in the molder only 5 to 10 min.

Jack E. Innis, stereotype foreman, Indianapolis (Ind.) *Star-News*, reported that the height of the halftone areas was maintained through the use of Mat Pak. Frank J. Stanczak, ANPA Research Institute, agreed that Mat Pak helps maintain the depth of the halftone dots and helps assure that the type-high height will be achieved in the halftone areas on plates.

Harry Eybers, of the Washington (D.C.) *Post & Times Herald*, asked how a newspaper could get some of the Mat Pak mats to try out. "Write to ANPA," was the reply.

Vernon R. Spitaleri, research director, Miami (Fla.) Knight Newspaper, asked the group as a whole whether any detailed cost analyses had been run using Mat Pak to ascertain the potential savings of the new material. Lee A. Wolterding, Kimberly-Clark Corp., said that one Eastern newspaper had made quite an exhaustive cost study and come up with these results: The cost of hand packing mats for one year was $174,000, of which $74,000 was computed as overtime. The cost of Mat Paking equipment which eliminated overtime for hand packing was $28,000. Thus, this newspaper could point to $46,000 in savings, at least, through the use of Mat Pak.

Spitaleri then asked whether predrying was required with Mat Pak. Stanczak said it was not recommended since it was felt that more consistent results could be obtained by by-passing pre-drying. However, he continued, it was possible to increase the shrinkage by pre-drying and, thus, some newspapers were doing it.

L. J. Griner, production manager, Knight Newspapers, Inc., Detroit, commented that his paper's stereotypers were pre-drying in order to retain impression in the mats and not to get more shrinkage.

Stanczak then repeated the burden of his talk in this session by saying that it was necessary for the newspapers to take Mat Pak and try in their own production in order to realistically determine the savings and potential savings of using Mat Pak. This is something the lab is not equipped to do, he continued. It must be done by the newspapers in the field.

W. E. Gibbons, production manager, Portland (Ore.) *Oregon Journal*, asked Robert Travis whether his glass mat had been exposed to the advertisers as yet. Travis replied that the agencies had been advised that the mat was being worked on. But the cost of the mat has not yet been determined so it can't be offered for sale. It was brought out in the discussion that followed that the first question advertising agencies ask about a new mat is: Will the newspapers accept it? The mat manufacturer has to be sure that it is acceptable to the trade. That is why the manufacturers of this type of materials must go slowly in introducing new products.

Two other stereotype mat developments were discussed at this session. Joe Goggin, Newspaper Publisher Supply Co., described a mat in which a group of stereotypers are collaborating. This mat, Goggin said, is

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ROTOGRAVURE
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Webenderfer 2 Units, 62" Web
Magazine Folder, signatures 8½ x 12
Newspaper Folder
standard papers 15 x 22
tabloid papers 11 x 15
Full automatic 2 Motor Drive
AC 220 volts, 3 phase, 60 cycles

JOHN GRIFFITHS CO., INC.
415 Lexington Avenue, New York 17, N. Y.

molded cold and utilizes no water, thus has no shrinkage, is air dried, and requires no cushions. Dave Rusch, Merchants Matrix Co., Chicago, described a mat being worked on by his firm as a resinous type mat, molded under heat and pressure.

The session ended on a somewhat lighter note when Roy Durie, stereotype foreman, Waco (Tex.) *News Tribune & Times Herald*, accused the developers of the new mats of keeping secrets from the smaller papers because he hadn't gotten any of the new mats to try to get casts for the tubular press at his paper. Rusch of Merchants Matrix Co. immediately offered to send some mats to Durie.

Shoestring Color

(Continued from Page 35)

not necessary to produce r.o.p. color. Proofs of color engravings are registered on a Vandercook proof press. The proof paper is taped for the red, yellow and blue proofs on the cylinder tympan. The Bourges process is used in producing color copy. After the plates have been prepared they are curved in a three roll bender to fit the plate cylinders on the press. Vlk stated that the *Tribune* is issued in three editions with a total circulation of 35,000 copies daily. All press runs are collect. As an aside, Vlk explained that collect runs are faster because the *Tribune* can't operate the press on straight runs. He also explained that the center line of the plate cylinder is out about ⅛ in. The plates are carded out for register. This register is gotten rid of to some extent also by trimming the plate in the stereotype department. The press units are cleaned by mounting smooth dummy stereotype plates on the plate cylinder. Vlk explained that the operation of cleaning the press rollers doesn't take much paper.

R.o.p. Color at Peninsula-Herald

Ted Durein, managing editor, Monterey (Calif.) *Peninsula-Herald* opened his address with the statement; "Color On A Shoestring. It's wonderful!" Durein went on to explain that the circulation of the *Peninsula-Herald* is 19,000 in a cow county in California. He said: "Our only distinction, if any, is that we do r.o.p. color with practically no special equipment and at very little cost. This seems to puzzle some people."

"Perhaps," continued Durein, "competent Craftsmen should be classified as special equipment. If so, we have some of the best. Other than that, however, our only equipment is a $52 densitometer. A few home made gadgets in the darkroom and a color hump on our 24 page stove pipe printing press."

Durein's main theme, however, was that the entire editorial advertising and mechanical force on a newspaper should work as a team in color production. "We have one photographer and one engraver," he continued, "our photographer prefers to work from 35 mm. negatives, although we tackle any size." He stated the *Peninsula-Herald* photographer can take pictures, process the transparencies and deliver black and white separation prints to the engraver in 4 hrs.

The speaker explained that his engraver comes up with color plates in which the force has so much faith that they are recklessly rushed directly to the press without taking time out for proofs. "He performs these miracles with a camera and etching machine which were old when I came to the paper 21 years ago," he concluded. Durein stated that the pressman prints directly from zinc engravings when possible although results from stereotype plates have been satisfactory even with the 75 line screen. The zincs are fastened to the saddle press plates with double sided tape. Plenty of "air" is left around the cuts on the black plates to allow registration.

One of Durein's concluding remarks was as follows: "Our color team has stood around the color proof press in actual physical agony awaiting results of a color experiment. It has ended in hysterical cheers and back-slapping and has sometimes ended in tears. In this case no man is an island, no man stands alone." It seems to *Printing Equipment Engineer* that this is the briefest and best possible explanation regarding shoestring color printing in any smaller size newspapers that could be given.

Employ Women To Prepare R.o.p. Color Art

William B. Spilman, production manager, Waynesboro (Va.) *News-Virginian* kept his audience laughing frequently by his native humor when

TROLLEY'S THE THING!

●Wrap-ups due to web breaks in long folder and color leads are hard to prevent, that is, if you don't have **COOKSEY SYSTEM TROLLEYS.**

Investigate the Cooksey System Today

KORTHE ENGINEERING CO.
9353 Seymour Ave., Schiller Park, Illinois

Sales Agents { The Goss Printing Press Co., Chicago
R. Hoe & Co., New York
Wood Newspaper Machinery Co., New York

For the Stereotyper . . .

The New MIDWEST NYLON Covered Creeper

Nylon on both sides of this durable rubber creeper prevents stretch. Ideal for clean, sharp mat reproduction.

Send for Sample Swatch

MIDWEST PUBLISHERS SUPPLY CO.
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$.75 per line 1 9/16" wide. Minimum ad 5 lines, 25 characters per line. Cash with order.

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We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

FOR SALE

Post Arrow 50 inch Gluer with Decitron Electronic Counter, Van Buren Ear Breakers and 15 horsepower Reliance Drive, purchased Dec. 1954. Staude Challenger Window Machine with new style vacuum drum, and 3 horsepower Reliance Drive, purchased Nov. 1954. Reply Box 543, PRINTING EQUIPMENT Engineer

WANTED

Stereotype mat roller for molding page newspaper mat. Ledger, Mexico, Missouri.

NEWSPAPER PRESSES

Complete Plants Equipped
Daily or Weekly

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Are you constantly struggling for quality printing?

Install Ideal rollers and relax!

ROCKETS for your job presses

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New **GRAYTONE** for your litho presses

IDEAL ROLLER & MANUFACTURING CO

Huntington Park, Calif. Chicago 8, Illinois Long Island City 1, N.Y.

he discussed r.o.p. color printing in his plant. The *News-Virginian* has a circulation of 7500 in a city of 15,000 population. The Goss Tubular press consists of two 8 page units giving a total capacity of 16 pages.

Spilman explained: "When we run one color with black in an ad, we are limited to 12 pages during the press run. If we run two colors and black, we can print only eight pages at a time.

"In our three years of handling color work," he explained, "we have had only one request for locally prepared original art. Being small, we rely heavily on our mat services to provide suitable headings and art for our advertisers. So far, we have been able to handle all but one request."

Spilman explained that his paper hit a snag when a local automobile dealer requested a big wreath for his annual Christmas greetings in 1954. He said: "It is really surprising to me how many people right at our fingertips can prepare acceptable art for use in the newspaper. We found that one of our two proofreaders could draw well; also the wife of our photographer; one of our Linotype operator's wives; but in this particular case, my own wife drew the wreath for the auto dealer." His ending remark was: "You see my wife is the daughter of the auto dealer."

Spilman explained that much of the credit for the success of r.o.p. color printing in the *News-Virginian* plant was due to a portable fountain designed by pressroom foreman, Ernest E. Butcher. A patent is now pending on the fountain. He listed a number of newspapers which are using the device. At first, newsprint waste was a threatening problem in connection with color printing. This was overcome by installing register devices on the tubular press and newsprint waste has been reduced to an insignificant level, he said.

Spilman exhibited a number of slides showing reproductions in color from the *News-Virginian*. He showed a slide of the art taken at the time of the marriage of Grace Kelly to Prince Ranier. He commented that the tints were a little off color but it didn't matter too much, "because the people in Waynesboro didn't know what the Prince's complexion was like."

Newsprint Conservation Methods

Under the subject of *Newsprint Conservation Methods*, four mechanical executives discussed the subject as follows: *Nine Column* Format, R. M. Frost, Beaumont (Tex.) *Enterprise and Journal*. Frost distributed a three page bulletin in which were shown the changes necessary to convert from an 11½ pica col. to the 9 col. page width. Joseph Budia, composing room foreman, Cincinnati (O.) *Enquirer*, discussed 11 pica columns for use in going to a 60 in. newsprint roll at the *Enquirer*. Joseph A. Lawler, New York (N. Y.) *Herald-Tribune* discussed 11¼ *Pica Columns*. The subject of 59 *in. Newsprint Rolls* was discussed by W. E. Gibbons, production mgr., Portland (Ore.) *Journal*. Gibbons is also a member of the ANPA Mechanical Committee.

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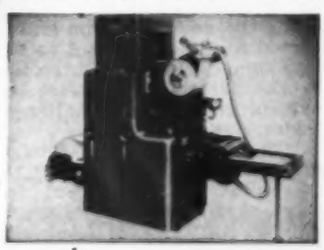

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Conservation

(Continued from Page 41)

press. One of these has chain driven units and straight spur gear teeth, which presented what seemed to the *Star* and *News* mechanical executives an impossible situation, even for Electric Eye control. Problems were encountered, but all were solved so satisfactorily that Hurletron controls have been ordered for all nine of the remaining color units.

"Our experience has demonstrated," White said, "that this equipment is a necessity if we are to produce the best quality of color printing. While it does not solve poor makeready or bad plates or side register, it does do the job that we expected it to do:

"1. It takes a great deal of responsibility from the pressman, making his job easier.

"2. It assures better register under a variety of normal printing conditions.

"3. It reduces the number of out-of-register copies on changing rolls and on the stopping and starting of the press.

"4. It, along with other tools and techniques we use, enables us to give our advertisers and subscribers the highest quality color reproduction of which we are capable.

"Of importance is the fact that it is a simple process, and one which can be completed very early in a run so that out-of-register printing can be held to a minimum."

Eybers and Schultz Concur

LeRoy Schultz, pressroom foreman, Milwaukee (Wis.) *Journal*, and Harry Eybers, production manager, Washington (D. C.) *Post & Times-Herald*, concurred with White's findings. "We found we had good cuts, good plates, good presswork and still had trouble with register on color runs," Eybers said, "and register controls seemed to be the only answer."

Crosfield Register Control

T. R. Sykes, research engineer, Toronto (Ontario, Can.) *Star*, presented a film on the *Crosfield Register Control*. The system used at the Toronto (Ontario, Can.) *Star* is installed on a Goss 12-unit rotogravure press with web compensation. Back-up, cut-off, side-lay and ink density controls can also be provided in the same basic system, Sykes said.

A recently added feature of the control is known as Supercorrection. In this system the compensator motor is operated in one direction for twice the register error and then reversed an amount equal to the error. The final result is a correction equal to the error, but because of initial overcorrection compensation is much faster, Sykes reported.

"The magnetic switches for all units are in one housing, and are driven at cylinder speed from the drive shaft," Sykes continued. "Each individual switch is adjusted at the start of press run to turn on its scanner at the proper time to view the mark.

"Control cubicle may be remotely located and contains power supplies, amplifiers and relays. Each part has its own removable chassis. Patch cord type of plug connections permit rapid replacement and test.

"A small control panel at the folder has meters indicating amount and direction of misregister, signal lamps indicating compensator operation, a manual automatic switch, manual compensator controls and a register shift control. . . Sometimes, due to poor cylinder laydown, it is desirable to favor one area in register. This is provided for by the register shift, a knob for each color calibrated in thousandths of an inch. Setting this control will hold register with marks shifted forward or backward with respect to each other."

Discussion Period

In the discussion period one production manager outlined an incentive system used at his paper to conserve newsprint. All electricians and service personnel and maintenance personnel were included in the plan. When the reduction in newsprint waste amounts to 0.1% for a three month period, an amount of cash equivalent to the saving is put into a fund for the workers. This fund can be used for a party, or a fishing vacation or however the workers decide they want to enjoy it. Suggestions on preventing newsprint waste are also encouraged and a suitable amount of cash is paid for the best suggestions. The winning suggestions are chosen by a committee.

The waste record of this newspaper dropped from 300.00 on the ANPA system to below 2.00 within two years. Suggestions included such things as leaving the wrappers on the rolls of newsprint until the rolls are on the reels. The Pressmen's training course has also been used, and it goes into newsprint conservation.

The question was raised as to what the newspapers represented at the pressroom session were doing with the first papers off a r.o.p. color run. John Park of the Chicago *Tribune* said his paper sent these first off papers out. With the Dallas *News*, Leven Deputy said that color units are webbed up first and thus are in pretty fair register by the time the complete papers begin coming off the press. They send these out. M. L. Priban, Cline Electric Mfg. Co., said that electric and electronic controls, such as Flexitrol, helped to speed up the register of color and to reduce waste considerably. Consensus seemed to be that all newspapers will soon have to find ways to reduce the number of mis-registered early copies they are sending out. As one man said: "Even though you may know that only a couple hundred copies of a certain edition are bad, if your advertiser or customer gets one, the whole edition is bad as far as he is concerned."

It was brought out in further discussion that by threading the web over angle bars and increasing or decreasing the tension on one end or the other of the angle bar, some side register adjustment on the web could be obtained. It was further mentioned that the Crosfield register control system does not consider the paper in side lay control. The Crosfield unit will compensate for mis-register in side lay in the print and adjust the print.

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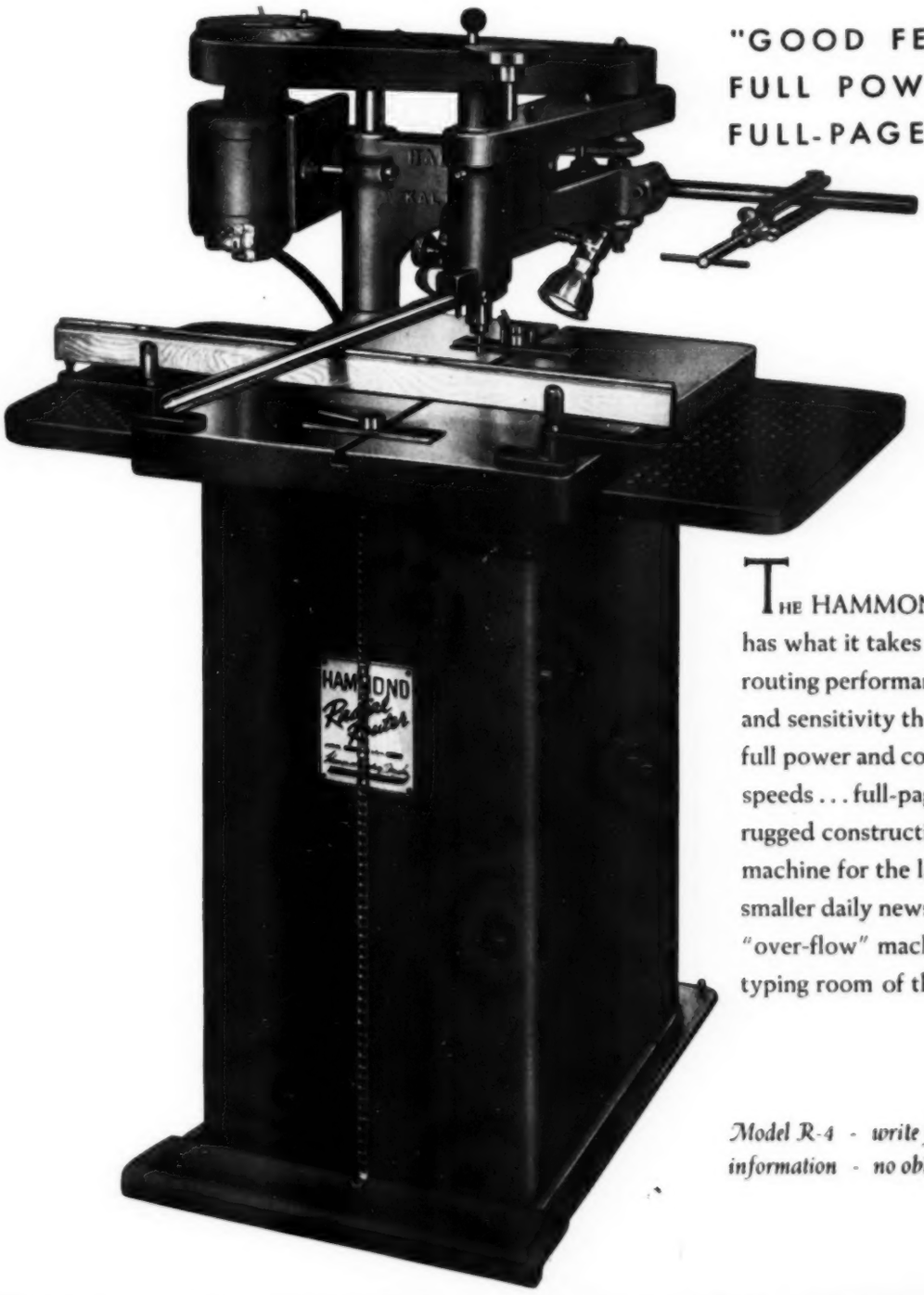

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